



Competition Law and Standard Essential Patents

Oscillating Between Protection of Patent Rights and Access to Standards

Urška Petrovčič

Thesis submitted for assessment with a view to obtaining
the degree of Doctor of Laws of the European University Institute

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Examining Board

Professor Giorgio Monti, European University Institute (Supervisor)
Professor Petros Mavroidis, European University Institute
Professor Dr. Thomas Ackermann, Ludwig-Maximilians-Universität München
Professor Dr. Hanns Ullrich, Max Planck Institute for Innovation and Competition,
Munich

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ABSTRACT

This thesis explores the way in which EU and U.S. antitrust rules address opportunistic conducts that emerge in the context of standard essential patents (SEPs). The analysis finds that the two systems have very different scopes in addressing those practices: conduct lawful under U.S. antitrust law is condemned by the EU competition law and vice versa. In contrast to other fields of antitrust, the differences between the EU and U.S. approach do not arise from the application of different legal standards, but rather reflect the core divergences in the statutory texts that address unilateral practices. The analysis also shows that both in the European Union and in the United States, competition authorities have tried to increase the scope of competition law—first, by stretching the antitrust doctrines outside established borders, and second, by advocacy measures designed to avoid opportunism related to SEPs. The thesis shows, nonetheless, that both approaches are problematic and a more cautious strategy is needed to avoid the risk of injecting imbalance in the standardization context.

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ABBREVIATIONS

ANSI	American National Standard Institute
BSI	British Standards Institution
CEN	European Committee for Standardization
CENELEC	European Committee for Electro-technical Standardization
CPC	Community Patent Conventions
DIN	Deutsches Institut für Normung
DOJ	Department of Justice
DRAM	Dynamic Random Access Memory
EC	European Community
ECJ	European Court of Justice
EPC	European Patent Convention
EPO	European Patent Organization
ETSI	European Telecommunication Standard Institute
ESO	European Standard Organizations
EU	European Union
FRAND	Fair, Reasonable and Non Discriminatory
FTC	Federal Trade Commission
FTCA	Federal Trade Commission Act
GSM	Global System for Mobile Communications
ICT	Information and Communication Technology
IEC	International Electro-technical Commission
IEEE	International Electrical and Electronics Engineers, Inc.
IP, IPR	Intellectual Property, Intellectual Property rights
ISO	International Organization for Standardization
IT	Information Technology
ITC	International Trade Commission
ITU	International Telecommunication Union
JEDEC	Joint Electron Devices Engineering Council
NPE	Non Practicing Entity
NTTA	National Technology Transfer and Advancement Act
PCT	Patent Cooperation Treaty
PDF	Portable Document Format
PLT	Patent Law Treaty

RAND	Reasonable and Non Discriminatory
R&D	Research and Development
SNIPP	Small but Significant Non-transitory Increase in Price
SEP	Standard Essential Patent
SO	Statement of Objections
SSO	Standard Setting Organization
TFEU	Treaty of the Functioning of the European Union
UK	United Kingdom
US	United States
VITA	VMEbus International

PART I

INTRODUCTION

1. SETTING THE CONTEXT

Standards are one of the main engines of today's economy.¹ Their use has important beneficial effects on consumers and the market.² By conveying information about products and reducing the information asymmetry between buyers and sellers, standards facilitate business transactions.³ Safety and quality standards protect consumers from purchasing goods or services of suboptimal quality. Interoperability standards increase consumer convenience, by allowing a combined use of products from different manufacturers⁴ and reducing the lock-in effect.⁵ They might also allow consumers to use their goods from remote locations and enable them to exchange information with others who use the same standard.⁶ Standards might have considerable positive effects in markets with strong network effects.⁷

Despite their substantial benefits, standards might provide the appropriate setting for anticompetitive practices that harm competition and consumer welfare. In

1 THE COMMISSION OF THE EUROPEAN COMMUNITIES, Towards an increased contribution from standardisation to innovation in Europe , COM (2008) 133 final (2008). (“[D]ynamic standardisation is an important enabler of innovation . . . A strong role for Europe in international standardisation is also a means of capitalising on European leadership in new markets and of gaining first-mover advantages in global markets.”); U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007) (“Industry standards are widely acknowledged to be one of the engines driving the modern economy.”).

2 E. S. Mintzer and L. M. Breed, *How to keep the Fox out of the Henhouse: Monopolization in the Context of Standard Setting Organizations*, N. 9 INTELLECTUAL PROPERTY & TECHNOLOGY LAW JOURNAL (2007).

3 H. SCHEPEL, THE CONSTITUTION OF PRIVATE GOVERNANCE: PRODUCT STANDARDS IN THE REGULATION (Hart. 2005).

4 H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87 (2007).

5 A. Soininen, *Patents and Standards in the ICT Sector: Are Submarine Patents a Substantive Problem or a Red Herring?*: INTERNATIONAL JOURNAL OF IT STANDARDS AND STANDARDIZATION RESEARCH § 5 (2007).

6 M. A. Lemley, *Antitrust, Intellectual Property Rights and Standard Setting Organizations*, 90 CALIFORNIA LAW REVIEW 6 (2002).

7 The network effect is related to the concept of network externality—a situation where the individual demand may be affected by the number of other people who have purchased the good. When there are positive network externalities, the value of the good increase when the number of users increases. For economic theory on network effects see: M. L. Katz and C. Shapiro, *Network Externalities, Competition, and Compatibility*, 75 THE AMERICAN ECONOMIC REVIEW (1985); J. Farrell & G. Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND JOURNAL OF ECONOMICS (1985); A. J. Devlin, *Standard-Setting and the Failure of Price Competition*, 65 New York University Annual Survey of American Law, 217 (2009).

the last few years, the antitrust debate on standards has focused on standard-essential patents (SEPs) and the opportunistic conduct of their owners. Standards, particularly those adopted in innovative industries, often include technologies that are not available in the public domain, but that are protected by patent rights.⁸ Once a patented technology has been implemented in the standard, its use becomes “essential” for all manufacturers of standard compliant goods. “[I]t is not possible on technical grounds . . . to [produce goods] which comply with a standard without infringing that patent.”⁹ In other words, manufacturers cannot produce a good compliant with the standard without implementing the essential technology, and hence infringing the SEP.¹⁰ After the implementation of a patented technology in the standard, the SEP owner thus becomes an unavoidable trading party for all manufacturers of standard compliant goods.

The ownership of a SEP might open the door for opportunism. The concerns with SEP owners’ opportunism initially focused on two practices: *patent ambush* and *patent holdup*. These are two distinct practices, with related harmful effects. Patent ambush refers to a situation where the patent owner participates in the standardization procedure, and intentionally conceals the existence of its patents that cover technologies that might be relevant for the discussed standard.¹¹ Only once the standard-setting organization (SSO) implements the patented technology in the standard, and manufacturers start producing their goods in compliance with the standard, the SEP owner reveals the existence of its patent(s). Patent ambush is damaging because it undermines the integrity of the standardization process by harming competition between rival solutions that compete for implementation in the standard. It risks excluding competing technologies based on misinformation.

8 Standards can also include other intellectual property rights (IPRs). A survey conducted by Blind et al. nevertheless shows that patents are the most common IPR, whereas other IPRs, as for instance copyrights, play a very limited role. See: K. BLIND ET AL., Study on the Interplay between Standards and Intellectual Property Rights (IPRs) (Tender No ENTR/09/015 2011).

9 European Telecommunication Standards Institute [ETSI], ETSI Intellectual Property Rights Policy, Annex 6, § 3.1 (Nov. 30, 2011), *available at* http://www.etsi.org/images/etsi_ipr-policy.pdf [hereinafter ETSI Intellectual Property Rights Policy].

10 P. Chappatte, *FRAND commitments—the Case for Antitrust Intervention*, 5 EUROPEAN COMPETITION JOURNAL 319 (2009).

11 D. Geradin & M. P. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL (2007) (“Patent ambush occurs where an IPR owner willfully and knowingly fails to meet its duty to disclose to a SSO ownership of IPR which are subsequently incorporated in the standard under adoption.”).

Patent ambush can also lead to a second harmful practice: patent holdup.¹² After the implementation of the technology in the standard, the use of the SEP becomes unavoidable for manufacturers of standard-compliant goods. The SEP owner might take advantage of the obtained position, by holding up manufacturers and impose on them exploitative licensing conditions. It might, for example, demand the manufacturer to pay excessive licensing fees, or agree on other licensing terms that the manufacturer would not accept in an *ex ante* licensing negotiation, that is, a negotiation of the licensing terms before the patented technology was implemented in the standard. Particularly when compliance with the standard is a *de facto* requirement for the participation in the market, manufacturers might have no other option than to accept the exploitative licensing conditions offered by the SEP owner.

The phenomena of patent ambush and patent holdup were initially associated with “non-practicing entities” (NPEs), that is, companies that own patents, but do not exploit them commercially directly by producing final goods.¹³ An NPE generates its income from licensing its patented technologies to downstream manufacturers, that is, manufacturers of goods that implement the patented technology. Several authors maintained that the NPE’s business structure favors opportunistic conduct in the standardization context.¹⁴ In industries involving so-called complex goods, there has traditionally been a high level of cross licensing.¹⁵ Patents required for the production of a single product are not in the hands of an individual undertaking, but are normally spread among competitors. In order to produce a final good, a manufacturer thus

12 The term holdup is used in economics to describe the bargaining power of one party, when due to the gap between economic commitments and subsequent negotiation, that party is able to appropriate some of the benefits that accrue from the investment of the other party. The theoretical framework of holdup has been applied to IPRs by Shapiro and implemented by several academics. C. Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in INNOVATION POLICY AND THE ECONOMY, Volume 1, pp. 119-150 (2001).

13 The literature also uses other names to describe NPEs, such as pure patent holders, non-competing firms, non-assertion entities—all referring to undertakings that earn their revenue from licensing their patent rights (or other IPRs), but that are not involved in the production of final goods.

14 P. Detkin, the first person to use the term “patent trolls,” defined an NPE as “somebody who tries to make a lot of money off a patent that he is not practicing and has no intention of practicing and in most cases he never practiced at all”—hence clearly referring to NPEs (See: The Patent Prospector: Patent Blog Troll (Dec. 8, 2007), available at http://www.patenthawk.com/blog/2007/12/patent_blog_troll.html). See also: C. V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, NORTH CAROLINA LAW REVIEW, Vol. 87 (2009); A. Layne-Farrar and K. M. Schmidt, *Licensing Complementary Patents: "Patent Trolls," Market Structure, and "Excessive" royalties* 25 BERKELEY TECHNOLOGY LAW JOURNAL 1121(2010).

15 A cross-licensing agreement is a licensing agreement where two or more undertakings grant a license to each other.

needs to not only use its own patented technologies, but also use those owed by its competitors. This interdependence on each other's patents resulted in a high level of cross licensing, which generally acted as a safeguard against the imposition of opportunistic licensing conditions. This pattern however changed with the appearance of NPEs. Given that an NPE is not involved in downstream production, it does not need to obtain a license from its own licensees. An NPE does not face constraints from cross licensing when setting its licensing conditions, and might be consequently more prone to hold up manufacturers.

The *Rambus* case represents perhaps one of the most discussed cases concerning an NPE's use of SEPs. Rambus operated as an NPE in the market for high-speed chip connection technologies. It developed a "Dynamic Random Access Memory" (DRAM technology), which became the most common form of computer memory. DRAM was an essential input into a variety of downstream products, such as personal computers, work stations, fax machines, printers, digital video recorders, and video games. The DRAM chips were standardized through the Joint Electron Devices Engineering Council (JEDEC), an SSO based in the United States. Rambus participated in the JEDEC's standardization procedure, without however making any claim regarding the existence of its patents.¹⁶ Only once the standard was adopted and the manufacturers started producing goods in compliance with the JEDEC's standard, did Rambus disclose the existence of its SEPs, and required manufacturers to pay a licensing fee that was considered excessive to the value of the SEPs.¹⁷

Rambus' conduct was challenged by competition authorities in the European Union and in the United States, as well as by private entities. In June 2002, the Federal Trade Commission (FTC) filed an administrative complaint against Rambus.¹⁸ It maintained that by purposefully creating the materially false and misleading impression to JEDEC that it possessed no relevant IPRs, and later enforcing such rights against manufacturers, Rambus monopolized or attempted to monopolize the market for DRAM, or otherwise engaged in unfair methods of competition in violation

¹⁶ Rambus filed its patent application in 1990. During its participation in the standardisation procedure, Rambus did not hold patents, but it obtained them only in 1999, three years after it left JEDEC. All the amendments obtained by Rambus relate back to the 1990s, when the original application was filed.

¹⁷ Initial Decision, Rambus Inc., Docket No. 9302 (F.T.C. 2004).

¹⁸ Administrative Complaint, Rambus Inc., Docket No. 9302 (F.T.C. 2002).

of Section 5(a) of the Federal Trade Commission Act (FTCA).¹⁹ In July 2007, the European Commission (the Commission) brought a parallel antitrust investigation, maintaining that Rambus' imposition of unreasonable royalties subsequent to a patent ambush could amount to an abuse of dominant position in violation of Article 102 Treaty on the Functioning of the European Union (Article 102 TFEU).²⁰

However, in none of the jurisdictions was Rambus' conduct found anticompetitive. In the United States, the Court of Appeal for the D.C. Circuit finally rejected the complaint brought by the FTC, maintaining that the FTC had failed to provide adequate proof that Rambus' patent ambush had anticompetitive effects.²¹ The D.C. Circuit maintained that the SEP owner's deceptive conduct during the standardization process is actionable under antitrust law only if there is evidence that it had an exclusionary effect and thus allows the SEP owner to unlawfully acquire or maintain market power. In the absence of such evidence, a mere deceptive conduct—although coupled with the imposition of exploitative licensing terms—does not constitute a violation of U.S. antitrust law.²² Also in the EU, there was no determination whether Rambus' conduct amounted to an abuse of a dominant position. The case was concluded with a commitment decision, through which the Commission made Rambus' offer to put a cap on the royalties binding.²³ Article 9 of Regulation 1/2003 provides that when an investigation is concluded with a commitment decision, the Commission determines that there are no longer grounds for action. There is no decision with respect to whether the challenged conduct constitutes a violation of Article 102 TFEU. The commitment decision may thus have helped the firms that relied on the standard, but it did not determine whether Rambus' conduct constituted an abuse of a dominant position in violation of Article 102 TFEU.

The Rambus cases initiated an intensive debate concerning the role competition law plays (and should play) in addressing the SEP owners' opportunistic conducts. Commentators have recognized that doctrines developed in the field of patent or

¹⁹ *Id.* at. 1.

²⁰ Press Release, Antitrust: Commission Confirms Sending a Statement of Objections to Rambus, MEMO/07/330 (2007).

²¹ *Rambus Inc. v. F.T.C.*, 522 F.3d 456, 462 (D.C. Cir. 2008).

²² *Id.* at. 464.

²³ Press Release, Antitrust: Commission Accepts Commitments from Rambus Lowering Memory Chip Royalty Rates, IP/09/1897 (2009).

contract law might be applied in addressing the SEP owner's opportunistic conduct.²⁴ However, several authors emphasized that while patent and contract law remedies might be tailored to address the interests of the individual licensees, they do not protect consumers from the broader implications that a SEP owner's opportunistic practices have on the market.²⁵ They maintain that the SEP owner's opportunism harms consumers directly (if higher royalties are passed on them in the form of higher prices) and indirectly (if the SEP owner's opportunism undermines the confidence in standards and the standardization process, depriving consumers of the benefits of standardization).²⁶ These authors consequently argue that there are strong policy reasons for addressing the SEP owner's opportunistic conduct through the provisions of competition law.

Other commentators have called for a more cautious approach.²⁷ They express skepticism in the ability of competition law to address the SEP owner's deceptive conduct during the standardization process.²⁸ Hovenkamp, for example, emphasizes that antitrust law should apply only in cases where the deception allows the monopolization of the market, or where there is at least a dangerous probability of

24 Private entities have often relied on different non-antitrust doctrines when defending against the patent infringement suit brought by a SEP owner. Infringers can allege, that the enforcement of a SEP was in violation of a FRAND commitment, and thus represented a breach of contract. Further, where the patent owner's misleading conduct leads the alleged infringer to reasonably infer that the patent owner does not intend to enforce its patent against the alleged infringer, the infringer can use the doctrine of equitable estoppel as a defense to a charge of patent infringement,. (See, e.g.: Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901 (ND Ill. 2012); Microsoft v. Motorola, 864 F. Supp. 2d 1023, (W.D. Wash. 2012)).

25 See, e.g., S. Royall, A. Tassar & A. Di Vincenzo, *Deterring "Patent Ambush" in Standard Setting: Lessons from Rambus and Qualcomm*, 23 ANTITRUST MAGAZINE 3 (2009); R. Dagen, *Rambus, Innovation Efficiency, And Section 5 Of The FTC Act*, 90 BOSTON UNIVERSITY LAW REVIEW 4 (2010). P. Chappatte, *FRAND commitments—the Case for Antitrust Intervention*, 5 EUROPEAN COMPETITION JOURNAL 319 (2009).

26 See, e.g., P. Chappatte, *FRAND Commitments—The Case For Antitrust Intervention*, 5 EUROPEAN COMPETITION JOURNAL 319 (2009); M. Jones, *Permanent Injunction, a Remedy by Any Other Name is Patently Not the Same: How Ebay v. Mercexchange Affects the Patent Right of Non-Practicing Entities*, 14 GEORGE MASON LAW REVIEW 1035 (2007). J. Farrell, J. Hayes, C. Shapiro, and T. Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST LAW JOURNAL 603 (2007). D. Culley, M. Dhanani & M. Dolmans, *Learning from Rambus—How to Tame Those Troublesome Trolls*, 57 THE ANTITRUST BULLETIN 117 (2012).

27 See, e.g., D. Geradin & M. P. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL 101 (2007). J. M. Golden, *'Patent Trolls' and Patent Remedies*, 85 TEXAS LAW REVIEW 2111 (2007). J. G. Sidak, *Patent Holdup And Oligopsonistic Collusion in Standard-Setting Organizations*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 123 (2009).

28 See, e.g., H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87 (2007).

success.²⁹ In other cases, he argues that doctrines derived from patent law are generally more appropriate for addressing the holdup problem. Other commentators have expressed particularly strong concerns with the use of competition law as a tool to address excessive royalties. In the United States, charging excessive prices does not constitute anticompetitive conduct: courts have long recognized that charging high (or even excessive) prices is a legitimate business practice. Likewise, exploitative practices have rarely been subject to the scrutiny under EU competition law. Although Article 102 TFEU provides the legal basis to address exploitative conduct, the Commission's enforcement has mainly focused towards practices of dominant undertakings that have exclusionary effects. Authors like Geradin and Rato suggested that a similar approach should be adopted in the context of SEPs. They emphasize that the application of competition law might result in false positives, which can in turn hinder the willingness of technology owners to take part in the standardization process.³⁰

Rambus was not an isolated example, and in the following years several cases arose that reanimated the already hot debate concerning the risk of the SEP owners' opportunism. Those cases showed that the competitive concerns related to the SEP owners' conduct go much beyond the phenomena of patent ambush and patent holdup. First, it became clear that the SEP owners' opportunism is not necessarily limited to NPEs. A number of practicing entities (companies that own patents and produce downstream goods implementing those patents)³¹ have been accused of engaging in anticompetitive practices related to SEPs.³² For instance, in the dispute *Apple v. Samsung*,³³ Apple accused Samsung, the owner of several SEPs and the producer of mobile devices, of failing to disclose its patents to ETSI, and for breaching its commitment to license its patents on fair, reasonable and non-discriminatory terms

²⁹ *Id.* at 105.

³⁰ D. Geradin & M. P. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL 101 (2007).

³¹ Practicing companies are often defined also as vertically integrated companies.

³² For the EU *see, e.g.*, Press Release, Antitrust: Commission Opens Proceedings Against Samsung IP/12/89 (Jan. 31, 2012). Press Release, Antitrust: Commission Opens Proceedings Against Motorola IP/12/345 (Mar. 4, 2012). For US *see, e.g.*, *Research in Motion Limited v. Motorola Inc.*, 644 F.Supp.2d 788 (ND Texas 2008); *Apple Inc. v. Samsung Electronics*, WL 4948567 (N.D. Cal. Oct. 18, 2011); *Apple Inc. v. Motorola Mobility Inc.*, WL 7324582 (W.D. Wis., June 07, 2011).

³³ *Apple Inc. v. Samsung Electronics* 2011 WL 4948567 (N.D. Cal.).

(so-called FRAND commitment).³⁴ Apple maintained, *inter alia*, that Samsung's conduct violated Section 2 of the Sherman Act. The case brought against Samsung thus shows that practicing entities might also engage in opportunistic practices such as patent ambush and patent holdup.

Second, later cases showed that patent ambush (or other forms of deceptive behavior during the standardization process) is not a necessary condition for patent holdup to arise. The SEP owner might hold up manufacturers and impose on them exploitative licensing conditions even if it did not act deceptively during the standardization process.³⁵ This became particularly clear during a wave of SEPs acquisitions in the mobile device industry. For example, Google acquired a large portfolio of Motorola Mobility's patents, including several SEPs.³⁶ Third parties raised concerns that the merged entity could use the position obtained through the acquisition of SEPs to force manufacturers to agree on onerous licensing terms. Although Google did not take part in the standardization process, and did not act deceptively during it, there was a perceived risk that Google could use its SEPs to hold up manufacturers.³⁷

Third, cases have shown that a SEP owner might not only use SEPs to hold up manufacturers and impose on them exploitative licensing conditions, but it might also use SEPs as a tool to harm competition in the downstream market. Particularly when the SEP is in the hands of a practicing entity that itself participates in the product market, the SEP owner might have the incentive to impose licensing conditions that affect the manufacturers' ability of compete in the downstream market. For example, by licensing a SEP at excessive royalties, the SEP owner can increase its rival's cost, and in this way hinder its ability to compete in the market for standard-compliant goods.

Despite the high number of cases that have thus far discussed the antitrust aspects of the SEP owners' opportunism, the scope competition law plays in

34 FRAND and RAND (reasonable and non-discriminatory) are normally used as interchangeable terms. Whereas the former is preferred in the EU, the latter is normally used in the United States.

35 R. Schmalensee, *Standard-Setting, Innovation Specialists, and Competition Policy*, 35 THE JOURNAL OF INDUSTRIAL ECONOMICS 526, 530 (2009) ("[P]atent hold-up does not necessarily involve hiding the existence of intellectual property.").

36 Case No COMP/M.638 -Google/ Motorola Mobility.

37 *Id.* at 108.

addressing the SEP owners' opportunistic conduct remains unsettled. In the EU, the Commission initiated several investigations against SEP owners, evaluating whether their conduct constitutes an abuse of a dominant position in violation of Article 102 TFEU. As of April 2014, the Commission however adopted only one infringement decision, providing little guidance on the limits EU competition law poses on SEP owners. Also in the United States, both private and public antitrust actions have been instituted to challenge the SEP owners' opportunism. Although some basic principles have been identified, several questions remain open. In particular, it remains unclear when the provisions of Section 2 of the Sherman Act or of Section 5 of the FTCA might capture SEP's licensing practices. The limits competition laws pose on the SEP owner's conduct remain therefore unsettled both in the European Union and in the United States.

The thesis aims to bring clarity into this field. By analyzing the applicability of the competition law provisions, the thesis aims to clarify the role competition laws have (or should have) in addressing the SEP owner's opportunistic conduct.

2. RESEARCH QUESTIONS

The central question the thesis addresses is: what role should competition law play in addressing the disputes arising in the SEP context?

To answer this question, there is a need to address several sub-questions. First, the thesis evaluates whether extant competition law doctrines allow competition authorities and private plaintiffs to effectively address a SEP owner's opportunistic practices. In this respect, the thesis analyzes whether, and under what conditions, practices, such as patent ambush, patent holdup, and the violation of the FRAND commitment, constitute an infringement of EU competition law and U.S. antitrust law. Second, the thesis discusses whether there is a need to revise the antitrust doctrines. Is there a need for a more extensive interpretation of competition law that would allow to capture SEP owners' opportunistic practices that fall outside the traditional antitrust doctrines? Third, the thesis evaluates whether competition law is able to prevent the SEP owner's strategic conduct *ex ante*, for instance, by stimulating the adoption of mechanisms that would prevent the SEP owner's opportunism.

The thesis compares the approach adopted in two jurisdictions: the EU and the United States. The two jurisdictions represent the systems in which there has been an extensive discussion concerning the antitrust liability for the SEP owners' opportunistic practices. It thus provides a good basis for a comparative analysis and for the evaluation of the possible solutions that could be adopted in other jurisdictions.

Given that the thesis focuses on applicability of competition law, it does not touch upon the ability of other bodies of law, such as contract law, patent law, equity principles, to address the SEP owners' opportunistic practices. It also does not touch upon the discussion on the quality of patents,³⁸ and the incentive they have on innovation. The thesis assumes that the patents that have been granted, are valid, and that the patents provide incentives for investments in the innovative process.³⁹

3. LITERATURE REVIEW

The U.S. antitrust literature has provided some of the leading articles in the debate concerning SEPs. Carl Shapiro provided a pioneering article in this field, by applying the holdup theory to patent rights. In his 2001 article *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, Shapiro emphasized that an involuntary infringement of a patented technology opens the door to opportunistic practices: the patent owner can try to extract royalties well above the value of its invention, given the substantial sunk cost faced by the infringer. Shapiro argued that the risk of patent holdup might be particularly acute in the standard-setting context, where the risk of involuntary infringement is high. He suggested that both "patent and antitrust policy makers should regard holdup as a problem of first-order significance in the years ahead."⁴⁰

38 Patents of a poor quality cause unwarranted market power, and consequently hamper competition that would otherwise stimulate innovation (Federal Trade Commission, *To Promote Innovation: The Proper Balance Of Competition and Patent Law and Policy*, at 5 (2003)). For discussion see: C. Shapiro, *The Design and Use of Patents*, IESE-BBVA Lecture, at 6 (2007), available at <http://faculty.haas.berkeley.edu/shapiro/madrid.pdf> ("The patent hold-up problem is exacerbated by poor patent quality.").

39 For criticism of these assumptions, see discussion in Chapter III: 1.1.1. Patent rights.

40 C. Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, 1 INNOVATION POLICY AND THE ECONOMY 119, 127 (2001). See also: J. Farrell, M. Lemley & C. Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS LAW REVIEW 2163 (2007).

Since Shapiro authored this paper in 2001, several other authors have discussed the problem of patent holdup. It is possible to identify two lines of theories. Some commentators supported the patent holdup theory presented by Shapiro, and maintain that patent holdup is real word phenomenon, which has strong negative effects on the market and consumers.⁴¹ Other commentators, such as Geradin and Sidak, reject the patent holdup conjuncture. Although they recognize that patent holdup is theoretically possible, they maintain that there is little evidence that the phenomenon occurs in practice.⁴² In their view, SEP owners are rarely able to hold up manufacturers and impose exploitative licensing conditions.

The literature also appears to be divided with respect to the role that competition law should have in addressing a SEP owner's conduct. First, there seems to no agreement concerning the desirability of antitrust intervention in cases when the SEP owner acts deceptively during the standardization process. Dagen, for instance, argues that there is a need for an antitrust intervention, given that consumer welfare is not always protected by private actions of the participants of the standardization process.⁴³ Other commentators however suggest that competition law has a limited ability to address a SEP owner's deceptive practices. Hovenkamp, for example, maintains that "antitrust law is a blunt instrument for dealing with many claims of anticompetitive standard setting."⁴⁴ In his view, antitrust law should apply only in cases where there is evidence that the SEP owner's deception allowed the monopolization of the market, or there is at least a dangerous probability of success of such monopolization by the SEP owner. Along the similar lines, Kobayashi and Wright

41 See, e.g., T. F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34. THE JOURNAL OF CORPORATE LAW 1151 (2009). M. Dolmans, *Standard Setting - the Interplay with IP and Competition Laws: How to Avoid False FRANDs*, 11 INTELLECTUAL PROPERTY LAW AND POLICY 791 (2010); (2008). J. Hayes, J. Farrell, C. Shapiro, T. Sullivan, *Standard Setting, Patents, and Hold-up*, 3 ANTITRUST LAW JOURNAL (2007).

42 D. Geradin & M. P. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL 101 (2006); E. Dorsey & M. R. McGuire, *How the Google Consent Order Alters the Process and Outcomes of FRAND Bargaining*, 20 GEO. MASON L. REV. 979 (forthcoming 2013); J. G. Sidak, *Patent Holdup And Oligopsonistic Collusion In Standard-Setting Organizations*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS (2009).

43 R. Dagen, *Rambus, Innovation Efficiency, and Section 5 of the FTC Act*, 90 BOSTON UNIVERSITY LAW REVIEW 1479, 1483 (2010) ("[...] there is concern that in the standard-setting situation, those implementing the standard will have little incentive to litigate").

44 H. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87, 87 (2007).

maintain that antitrust laws fail to provide a satisfying answer to the problem of patent ambush. In the view of these commentators, antitrust laws would provide only a marginal benefit over the application of other bodies of law.⁴⁵ They consequently suggest that other areas of law might be more appropriate to address the problems that arise in the SEP context.⁴⁶

The literature does also not agree on the role competition law should have in addressing the SEP owner's exploitative licensing practices. Several authors have strongly supported the application of competition law. Cary, Kaiser, Nelson and Sistla, for example, maintain that other bodies of law provide incomplete solutions, and only antitrust law can "ensure that private parties and government enforcement authorities can seek redress where the underlying abuse harms competition."⁴⁷ Fuchs similarly argues that patent holdup should be considered a *per se* violation of Article 102 TFEU. He suggests that there are good reasons for competition authorities to control excessive prices, if, as in the case of industry standards, competition is blocked. In discussing the methods to identify excessive royalties, Fuchs suggests that the burden of proof to show that royalties are reasonable should be on the SEP owner.⁴⁸ Others authors have however discouraged the application of competition law towards exploitative conduct.⁴⁹ Geradin recognizes that Article 102 TFEU provides a legal basis for the intervention, but he argues that such intervention is not desirable from a policy perspective. He argues that controlling the level of royalties involves several difficulties, and that wrong decisions may have detrimental effects on the economy. By

45 B. H. Kobayashi & J. D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 469(2009) ("Specifically, we find that the application of the antitrust laws to patent holdup will provide little marginal benefit over, and conflict with, other specific laws regulating the same area, and also will generate high risk for errors in the application of the antitrust laws.").

46 *Id.* ("[c]ontract and patent law are superior regulatory institutions for dealing with the problems associated with patent holdup."). For similar positions see: B. D. Abramson, *The Patent Ambush: Misuse or Caveat Emptor?*, PTC RESEARCH FOUNDATION (2011).

47 G. S. Cary, S. J. Kaiser, M. W. Nelson & A. R. Sistla, *The Case For Antitrust Law To Police The Patent Holdup Problem In Standard Setting*, 77 ANTITRUST LAW JOURNAL (2011).

48 A. Fuchs, *Patent Ambush Strategies and Article 102 TFEU*, in MORE COMMON GROUND FOR INTERNATIONAL COMPETITION LAW (Warren S. Grimes Josef Drexler, Clifford A. Jones, Rudolph J. R. Peritz, Edward T. Swaine ed. 2011).

49 J. Hillel, *Standards \times Patents \div Antitrust = ∞ : The Inadequacy of Antitrust to Address Patent Ambush*, 017 DUKE LAW & TECHNOLOGY REVIEW 4 (2010). ("[Y]et at the same time, patent royalty windfalls are undeserved. Antitrust simply does not fit the patent ambush problem, and alternate remedies are required.").

controlling the returns on innovation, competition intervention can reduce the incentives to innovate, and through this, impede dynamic competition.⁵⁰

The legal and economic literature has intensively discussed the meaning of the FRAND commitment. This is a commitment which the SEP owner makes to the SSO—normally before its technology is implemented in the standard—stating that the SEP owner is willing to license its technology on fair, reasonable and non-discriminatory (FRAND) terms to any person interested in using the standard.⁵¹ Also in this case, however, there seems to be no agreement on the exact limits that the FRAND commitment poses on the SEP owner's licensing practice. There is, for example, no agreement on whether the FRAND commitment prohibits exploitative licensing practices. In the view of some scholars, such as Dolmans, Carrier, Mair and Maasdam, and Chappatte, a FRAND commitment aims to prevent both the SEP owners' exclusionary and exploitative practices.⁵² They argued that a FRAND commitment aims to prevent the abuse of market power obtained by virtue of the implementation in the standard.⁵³ Cary emphasizes that allowing SEP owners to charge whatever monopoly rate the market will bear would impose the very economic

50 D. Geradin, *Abusive Pricing in an IP licensing Context: An EC Competition Law Analysis*, EU Competition Law and Policy Workshop (2007), available at [http://www.eui.eu/RSCAS/Research/Competition/2007\(pdf\)/200709-COMPed-Geradin.pdf](http://www.eui.eu/RSCAS/Research/Competition/2007(pdf)/200709-COMPed-Geradin.pdf)

51 The acronym RAND, referring to “reasonable and non-discriminatory,” is sometimes also used. Despite the elimination of the word “fair,” courts and commentators have not recognized major differences between the FRAND and RAND.

52 See, e.g., M. Dolmans, *EC Competition Law and IP licensing in a Standard-Setting Context*, ABA Section of Antitrust Law, Brown Bag Seminar on Standards and IP (June 22, 2007) (“Economic principle underlying FRAND is well understood: essential patent holders should not exploit the added power gained as a result of being included in the standard.”); M. A. Carrier, *A Roadmap to the Smartphone Patent Wars and FRAND Licensing*, 2 CPI ANTITRUST CHRONICLE (2012) (“A popular way to address the holdup problem is to require patentees to agree before the standard is selected to license their technologies on reasonable terms.”); C. Mair & Y. Maasdam, *Competition and Standardization on the Cutting Edge: the Commission's Views on Striking the Balance* (2011), available at: <http://120664 weblog.leidenuniv.nl/2011/02/04/competition-and-standardization-on-the-c> (“The FRAND (“Fair, Reasonable and Non-Discriminatory” licensing terms) commitment (or “RAND” in the US) is found in the IPR policies of many SSOs, and is designed to address the problem of ‘patent holdup’”).

53 P. Chappatte, *FRAND Commitments—The Case For Antitrust Intervention*, 5 EUROPEAN COMPETITION JOURNAL 319, 327 (2009) (“In committing to license on FRAND terms, the patent owner accepts the obligation to moderate its royalty demands in exchange for the benefits that will accrue from the increased licensing opportunities that are created by the inclusion of its technology in standard compliant products.” G. S. Cary, *The Case for Antitrust Law to Police the Patent Holdup Problem in Standard Setting*, 77 ANTITRUST LAW JOURNAL 913, 916 (2011) (“[T]he obligations imposed by SSOs are intended to protect the same interest: guarding against the anticompetitive appropriation and misuse of the ex post monopoly power that may result from selecting a standard [...]. FRAND obligations preserve the *ex ante* condition (where the technology faced competition from alternatives) by requiring an essential patent holder to offer ex post licensing terms and royalties that are commensurate with the competitive terms that would have applied ex ante.”).

harm that the FRAND commitment was intended to avoid.⁵⁴ Other commentators however argue that a FRAND commitment only aims at preventing exclusionary licensing practices. Brooks and Geradin suggest that the FRAND commitment represent a promise to engage in good-faith negotiations with any undertaking wishing to implement the standard.⁵⁵ In their view, the FRAND commitment does not impose any specific limit on the level of royalties the SEP owner can charge, but only prohibits the imposition of a licensing fee that would amount to an actual refusal to license.⁵⁶ Sidak similarly argues that “[t]he FRAND commitment ensures *access* to the standard. SSOs IPR policies do not say how to divide economic rents between the SEP holder and the licensee.”⁵⁷

Further disagreement arises in relation to the question whether a FRAND commitment precludes the SEP owner from requesting an injunction against an infringer of the SEP.⁵⁸ Dolmans, Chappatte, Layne-Farrar, Miller, Lemley and Shapiro maintain that, by committing to license its SEP on FRAND terms, the SEP owner implicitly waves its right to an injunction.⁵⁹ In their view, in a case of an infringement, the SEP owner has only the right to demand damages for the patent infringement. Others have however criticized such interpretation. Geradin and Rato emphasize that interpreting a FRAND commitment as a waiver of the right to an injunction violates the contract law principles in most jurisdictions, which generally require that the waiver of a right ought to be made explicit, or at least be derived from circumstances that cannot possibly be interpreted in any different way.⁶⁰ In their

54 M. W. Nelson, G. S. Cary, S. J. Kaiser, & A. R. Sistla, *The Case For Antitrust Law To Police The Patent Holdup Problem In Standard Setting*, 77 ANTITRUST LAW JOURNAL 913, 919 (2011).

55 D. Geradin & M. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3. European Competition Journal 101 (2007).

56 A constructive refusal to license is the SEP owner’s offer to license its patents on unreasonable terms, such as extremely high prices, that are ultimately rejected by the potential licensee.

57 G. Sidak, *The Meaning of FRAND: Part I: Royalties*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931, 995 (2013).

58The term injunctions or injunctive relief refers to an order by the court that the defendant cease a specific behavior, in the context of SEP, an order to cease the patent infringement.

59 M. Dolmans, *Standards for Standards*, 26 FORDHAM INT’L L.J. 163, 185 (2002); M. A. Lemley & C. Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS LAW REVIEW 1991 (2007); J. S. Miller, *Standard Setting, Patents, and Access Lock-In: Rand Licensing and the Theory of the Firm*, 40 INDIANA LAW REVIEW 351 (2006).

60 D. Geradin & M. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL 101, 117 (2006).

view, a FRAND commitment does not meet such requirements. They hence suggest that even subsequent to a FRAND commitment, a SEP owner might be still able to obtain an injunction against the infringer.⁶¹ Some commentators have also emphasized that categorically rejecting injunctions to SEP owners would not be a good policy solution, given that it would confer too much power on a potential infringer. “[A]n infringer would have nothing to lose, and everything to gain if he could count on paying only the normal, routine royalty non-infringers might have paid.”⁶²

There is also no agreement in the legal and economic literature of what constitutes a fair and reasonable royalty. Several authors attempt to provide a definition of FRAND terms. Sidak discusses different methodologies that can be applied to determine FRAND royalties, suggesting that past licensing agreements provide the best benchmark.⁶³ Shapiro and Varian maintain that a fair and reasonable royalty is a royalty that the SEP owner could have obtained in a negotiation before the standard was adopted.⁶⁴ This position has been accepted by the DOJ and the FTC, as well as some other authors.⁶⁵ Finally, some commentators have not made any attempt to define the exact meaning of FRAND. In their view, the terms “fair” and “reasonable” were intentionally left open to interpretation, so as to allow the parties to

61 *Id.* at 117 (2006)). See also G. Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 511 (2013)

62 A. Layne-Farrar, *Be My FRAND: Standard Setting and Fair, Reasonable and Non-discriminatory Terms*, LECG Working Paper, 12 (2010); J. S. Miller, *Standard Setting, Patents, and Access Lock-In: Rand Licensing and the Theory of the Firm*, 40 INDIANA LAW REVIEW 351 (2006).

63 G. Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931, 1000 (2013).

64 C. SHAPIRO & H. VARIAN, *INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY*, Harvard Business School Press, at 241 (1999).

65 The DOJ and the FTC suggested that: “Courts should recognize that when it can be determined, the incremental value of the patented invention over the next-best alternative establishes the maximum amount that a willing licensee would pay in a hypothetical negotiation. Courts should not award reasonable royalty damages higher than this amount[.] Courts should apply the hypothetical negotiation framework to determine reasonable royalty damages for a patent subject to a RAND commitment. Courts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was chosen.” US D.O.J. & THE F.T.C., *THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION* at 21-23 (2011). See also: D. G. Swanson & W. J. Baumol, *Reasonable and Non-discriminatory (RAND) Royalties, Standards Selection, and Control Of Market Power*, 73 ANTITRUST LAW JOURNAL 1, 5 (2005) (suggesting that the objective of the FRAND commitment is to prevent IP holders from setting royalties that exercise market power created by standardization. “The patent holder should thus be able to obtain the incremental rent that arises from standardization with respect to the next best alternative, but not the value arising from the standardization).

determine the specific content of the agreement by taking into account the specific circumstances of their relationship.⁶⁶

In discussing the problems of patent ambush and patent holdup, some commentators have discussed the role of NPEs, and the way in which competition laws should address their conduct. Also in this respect, the legal and economic literature seems to be divided. Several authors maintained that the NPE's business structure favors opportunistic practices in the standard-setting context. Rajkumar believes that by engaging in baseless litigation and enforcing patents of dubious validity, NPEs not only overwhelm the legal system, but also increase the manufacturers' production costs.⁶⁷ He also argues that the litigation initiated by NPEs reduces the manufacturers' funding (and personnel) available for innovation.⁶⁸ In the same vein, Shapiro argues that NPEs provide little contribution to the innovative process.⁶⁹ On the contrary, other authors have been more supportive towards NPEs. Mann and Geradin for example maintained that NPEs can increase competition in the upstream market, given that the entry costs incurred only in the upstream market might be substantively lower than the costs incurred when starting an entire production process.⁷⁰ Several authors have also maintained that NPEs provide liquidity to the market for patents, and through this, they stimulate innovation.⁷¹ Schmalensee has also argued against a competition policy that would favor practicing entities over NPEs. He noted that although NPEs face a more severe double marginalization problem than practicing entities would, the latter have the incentive

66 R. G. Brooks & D. Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INTERNATIONAL JOURNAL OF IT STANDARDS AND STANDARDIZATION RESEARCH 1, 13 (2012).

67 V. Rajkumar, *The Effect Of Patent Trolls On Innovation: A Multi-Jurisdictional Analysis*, 1 INDIAN JOURNAL OF INTELLECTUAL PROPERTY LAW 33 (2008).

68 *Id.* at.

69 C. Shapiro, *The Design and Use of Patents*, IESE-BBVA Lecture (2007), available at <http://faculty.haas.berkeley.edu/shapiro/madrid.pdf> ([T]he so-called "patent trolls" who may do little or nothing by way of actual innovation and may not even sell any products, but who are expert at exploiting patents and, some would say, holding up their victims using the patent system.)

70 D. Geradin, A. Layne-Farrar & A. J. Padilla, *Elves or Trolls? The Role of Non-Practicing Patent Owners in the Innovation Economy*, Industrial and Corporate Changes (2011); R. J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, 83 TEXAS LAW REVIEW 961 (2005).

71 A. Layne-Farrar & K. M. Schmidt, *Licensing Complementary Patents: "Patent Trolls", Market Structure, and "Excessive Royalties"*, Discussion, 15 GOVERNANCE AND THE EFFICIENCY OF ECONOMIC SYSTEMS (2009); J. F. McDonough, III, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 EMORY LAW JOURNAL 189 (2006).

to diminish competition by raising rivals' costs.⁷² Similarly, Schmidt has emphasized that practicing entities may tend to charge higher prices than NPEs, given that they have the incentive to raise rivals' costs, and in this way, gain a competitive advantage against downstream rivals.⁷³

Relatively little attention has been devoted to the role competition law should play in preventing the SEP owners' opportunism. Hovenkamp noted that given the limited ability of antitrust law to capture all potential opportunistic conduct, the institutional design of standard-setting procedures provides perhaps the best remedy to prevent the SEP owners' opportunistic practices.⁷⁴ In 2001, Lemley conducted a study on the IP policy adopted by various SSOs.⁷⁵ While the study showed that the IP policies vary considerably from one SSO to the other, it nonetheless helped in identifying some common features. Lemley made a few suggestions for preventing opportunism by a SEP owner. He suggested that SSOs should adopt mechanisms that will stimulate participants to declare their FRAND licenses *ex ante* and introduce penalty defaults for the failure to comply with SSOs' rules. Lemley also suggested some reforms in patent law, mainly suggesting limiting abuses to the continuation practice, and limiting the right to an injunction.⁷⁶ These commentators however do not discuss what role (if any) competition law should play in stimulating these changes.

4. GOALS OF THE RESEARCH

The present thesis aims to contribute to the existing literature in several ways. First, the thesis contributes to the field of comparative law, by providing a comparative analysis of the application of the EU competition law and U.S. antitrust

72 R. Schmalensee, *Standard-Setting, Innovation Specialists, and Competition Policy*, 57.3 THE JOURNAL OF INDUSTRIAL ECONOMICS 526 (2009).

73 K. Schmidt, *Licensing Complementary Patents: "Patent Trolls," Market Structure, and "Excessive" Royalties*, Discussion Paper 275 (2009), available at <http://www.sfbtr15.de/uploads/media/275.pdf>.

74 H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87 (2007). See also: F. Leveque & Y. Ménière, *Technology Standards, Patents and Antitrust*, 9 COMPETITION AND REGULATION IN NETWORK INDUSTRIES 29 (2008).

75 M. A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIFORNIA LAW REVIEW 1889 (2002).

76 M. A. Lemley, *Ten Things to do About Patent Holdup of Standards (and One Not To)*, 48 BOSTON COLLEGE LAW 149 (2007).

law when addressing the SEP owner's unilateral conduct. In both jurisdictions, the SEP owner's conduct has been addressed through the provisions of competition law. Not only have competition authorities addressed similar conducts, but they have often prosecuted the same licensing practices undertaken by the same SEP owner. Cases addressing the SEP owner's behavior thus provide an excellent basis for a general comparison on the EU and U.S. enforcement practices in the context of unilateral conduct. By comparing the applicability of the competition law in these two jurisdictions, the analysis therefore contributes to the general discussion on the similarities and divergence between the EU and the U.S. competition law.

Second, the thesis contributes to a more practical discussion on the antitrust liability for SEP owners. Although several authors have discussed the SEP owner's antitrust liability under EU competition law and U.S. antitrust law, the discussion is often scattered in individual articles. To my knowledge, there is no comprehensive analysis of the antitrust liability a SEP owner might face in the two jurisdictions. The present research aims to fill this gap. By reviewing past cases and analyzing the applicability of competition law to the various licensing practices, the thesis aims to define the circumstances in which a SEP owner might face antitrust liability under EU competition law, U.S. antitrust law, or both. The research might be thus helpful for practicing lawyers and companies, in identifying the limits that competition law poses on the SEP owner's conduct.

The thesis also adds a different perspective to the discussion of SEPs, by separately analyzing the antitrust liability for the SEP owner's deceptive practices during the standardization process and the liability for the SEP owner's engagement in strategic licensing practices after the standard has been adopted. The extant literature rarely distinguishes between the two types of conduct. To the contrary, some authors (and sometimes even competition authorities), discuss the SEP owner's deceptive practices and the strategic licensing conduct under the same heading, seeing them as a different resurgence of the same problem.⁷⁷ However, there are important

⁷⁷ See, e.g., V. Torti, *IPRs, competition and standard setting: in search of a model to address hold-up*, 33(9) EUROPEAN COMPETITION LAW REVIEW 387 (2012) ("From a competition law perspective, patent hold-up is problematic as it may lead to distortions of the competitive process (i.e. the selection of the optimal technology by SSOs), to the ultimate detriment of consumer welfare."); B. D. Abramson, *The Patent Ambush: Misuse Or Caveat Emptor?*, PTC Research Foundation (2011). ("The patent ambush [is] a particular iteration of the patent holdup problem"); Statement of the Department of Justice's

differences between the two types of conduct, which necessarily requires a different antitrust analysis. The thesis points out those differences, and analyzes their implications on the SEP owner's antitrust liability.

Finally, by providing its own perspective, the thesis contributes to the broader policy discussion on the role that competition law should have in addressing the disputes arising in the context of SEPs.

5. STRUCTURE OF THE THESIS

The thesis is divided in three parts. Part I provides a background, which is necessary to understand the issues that are discussed in the second and third parts. To provide context, Chapter 2 sets out an overview of the different types of standards, SSOs, and the processes through which standards are adopted and implemented by market participants. Next, the chapter identifies the principal antitrust concerns that might arise in the standardization context, particularly when standards rely on technologies protected by patent rights. The chapter distinguishes between anticompetitive practices that (1) arise during the standardization process, and (2) those that occur after a patented technology has been implemented in a standard. Chapter 3 provides the reader with an overview of the relationship between patent rights and competition law. The analysis reviews the past case law and identifies the limits that competition law imposes on the exercise of patent rights. The chapter provides a comparative analysis, pointing out the differences in the approaches adopted in the European Union and in the United States.

Part II focuses on the SEPs owners' antitrust liability. Chapter 4 discusses the SEP owners' market power—one of the core elements of the antitrust offence. The

Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd., U.S. D.O.J. (2012) ("The threat of an injunction allows a SEP holder to demand and realize royalty payments reflecting the investments firms make to develop and implement the standard, rather than the economic value of the technology itself. In addition to harming incentives for the development of standard-compliant products, the threat of an injunction can also lead to excessive royalties that may be passed along to consumers in the form of higher prices. Alternatively, an injunction or exclusion order could ban the sale of important consumer products entirely. This type of "patent ambush" (emphasis added) harms competition and consumers and is rightly condemned by the Commission.").

chapter identifies the elements that competition authorities and courts should take into account in evaluating the SEP owner's market power. It emphasizes that the implementation of a patented technology in a standard is not sufficient to prove the existence of significant market power, leading to a dominant position or monopoly.

The two following chapters discuss the applicability of competition law to the conduct of a SEP owner found to possess significant market power. Chapter 5 analyzes the applicability of competition law to a SEP owner's deceptive practices during the standardization process. It identifies the circumstances under which the SEP owner might face liability under EU competition law and U.S. antitrust law. The analysis shows that the application of competition law provisions is likely to lead to different outcome in the two jurisdictions. Surprisingly, however liability is more likely to arise under U.S. antitrust law, whereas most deceptive SEP owners will escape the liability under EU competition law. Next, Chapter 6 evaluates the applicability of competition law to the strategic use of SEPs. In this case as well, it is evident that the SEP owner faces different constraints under EU competition law and U.S. antitrust law. The results of the analysis are nevertheless more predictable. The SEP owner faces stricter constraints under EU competition law than under U.S. antitrust law. The final chapter of this section provides a short summary of the analysis, and identifies the gaps that each competition law system faces when addressing the SEP owner's opportunistic practices.

Part III focuses on two main issues. Chapter 7 examines the available antitrust remedies that could be imposed on a SEP owner whose conduct violates competition laws. In this respect, the chapter provides an overview of the solutions adopted in practice, and evaluates their effectiveness in achieving the goals of the antitrust intervention. Next, Chapter 8 evaluates whether the mechanisms available outside the competition law domain could be more effective in addressing the concerns related to SEPs, and examines what role competition law should play in stimulating the development of such mechanisms. Chapter 9 provides an overview of the research results and discusses the policy implications that arise from the study.

The thesis was finalized on May 31st, 2014. Therefore, the discussion only reflects cases, the literature and data available until that date.

STANDARDS AND STANDARD ESSENTIAL PATENTS

To provide the reader with a good understanding of the future analysis, this chapter introduces the concepts of standards, standardization process, and SEPs. First, the chapter discusses the different types of standards, SSOs, and explains the process through which standards are implemented by market participants. The chapter then focuses on the antitrust concerns that might arise in the standardization context, particularly when standards rely on technologies protected by patent rights. The chapter identifies the main kinds of conduct that can trigger antitrust concerns and analyzes the effects that such conduct might have on the market. Finally, the chapter provides a brief overview of industry developments, with the aim to present the reader the possible explanations for the numerous disputes related to SEPs.

1. INDUSTRY STANDARDS

1.1. *Standards*

Standards are “documents that define technical or quality requirements with which current or future products, production processes, services or methods may comply.”⁷⁸ The requirements determined in the standard can range from general product characteristics to detailed and exact specifications. Standards can have two distinct functions: (1) to guarantee the quality or safety of a product, or (2) to control interoperability in a network market.

Standards can be determined through different channels. It is possible that the standard arises from the market. A company might develop its own standard specification that becomes so successful that other market participants start adhering to it. The classical example of such standard is the QWERTY system for typewriters and keyboards. The system has never been selected as a market standard. Nevertheless, manufacturers complied with it, and nowadays, most keyboards

⁷⁸ EUROPEAN COMMISSION, A Strategic Vision for European Standards: Moving Forward to Enhance and Accelerate the Sustainable Growth of the European Economy by 2020, at 1.1. (2011)

available in the market follow the QWERTY format.⁷⁹ Other standards, normally defined as *de jure* standards, are developed by SSOs, organizations where interested stakeholders meet and agree on the standard to which adhere in the future.⁸⁰ Examples of *de jure* standards are the Portable Document Format (PDF) and the Global System for Mobile Communications (GSM).

The determination of a *de jure* standard can take place in the private sphere or in the public sphere. In sectors where the need for consumer protection, public health, or safety considerations is strong, the standardization process generally lies in the hands of a public authority.⁸¹ Here, standards are set by, or on behalf of, a legislator. The adherence to such standards is generally legally binding for all market participants. There are, on the other hand, areas in which the legislator may not find it necessary to adopt a specific standard, but private parties have nonetheless done so. The purpose of the standards adopted in the private sphere is, generally, to facilitate business transactions at the national, regional or transnational level. The adherence to standards set by private SSOs is voluntary. Manufacturers are not legally bound to produce their goods in compliance with the selected standard.

The distinction between a standard set by a public body and a private body is not always clear. The adequate elaboration of a technical standard often requires expertise in specific fields—a knowledge that public institutions do not always possess. The legislator might consequently decide to rely on the expertise of private entities, and delegate to them the selection of a specific standard. The legislator might also decide to implement in the legislation, a standard that has been already adopted in the private sphere. This is particularly common in the United States where the legislator often relies on standards developed in the private sphere.⁸²

The thesis focuses primarily on standards set by private SSOs. Although anticompetitive concerns may arise also in the context of standards set by public

79 The literature sometime labels such standard as *de facto* standards. However, in this thesis, the term “*de facto* standard” is used to refer to standard whose compliance is a *de facto* requirement for a player’s the participation in the market. For discussion see: Chapter II, section 1.2.

80 There are different definitions of *de jure* standards, some referring to standards adopted by the government, and others referring to standards developed by accredited SSOs. For the purpose of this thesis, the term *de jure* standard refers to any standard adopted by an SSO.

81 J. M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 BERKELEY TECHNOLOGY LAW JOURNAL 623 (2002).

82 For discussion see: Chapter II: [1.2. Standard-setting organizations](#).

authorities, they might require a different antitrust analysis. In the EU, for example, competition law provisions address only the conduct of undertakings performing an economic activity. On the contrary, public bodies do not perform an economic activity are not subject to the limitations set by Articles 101 and 102 TFEU.⁸³ In the United States, the scrutiny of public standardization activities might follow a different path, given the considerations of state-action and petitioning-immunity doctrines.⁸⁴

1.2. *Standard-setting organizations*

The structure and *modus operandi* of private SSOs can differ considerably from organization to organization. SSOs are generally industry based. Their members are often representatives of the industry affected by the discussed standard. This includes manufacturers of standard-compliant goods, technology suppliers, but often also consumers, representatives from academia or regulatory bodies.

SSOs can operate at the national, regional or international level. Most countries have a national standardization organization active in the field of standardization. Examples of such organization are the British Standards Institution (BSI) and the Deutsches Institut für Normung (DIN). The structure of the organizations varies from

⁸³ The Court made this clear in *SELEX Sistemi Integrati Spa v. Commission*, where it rejected to apply provisions of competition law to the activities of the European Organization for the Safety of Air Navigation (Eurocontrol). Eurocontrol is an international organization established by various European states involved in, among other things, the adoption and implementation of common standards and specifications in the sector of air navigation. The Court emphasized that the adoption of standards by the executive organ of Eurocontrol—made up of state-appointed directors of the civil aviation administration of each contracting Member State—represented a legislative activity, and not an economic one. It consequently determined that the provisions of competition law could not be applied to the activity of Eurocontrol. (See C-113/07 *SELEX Sistemi Integrati Spa v. Commission* ECR P. I-02207 (2009)).

⁸⁴ The Standard Development Organization Advancement Act of the 2004 confirmed that standards developed by government entities are not subject to challenge under U.S. antitrust rules. The Supreme Court confirmed this in *Eastern Railroad Presidents Conference v. Noerr Motor Freight*, by maintaining that “[w]here a restraint upon trade or monopolization is the result of valid governmental action, as opposed to private action, no violation of the Act can be made out.” (*Eastern R.R. Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 136-137 (1967)). The immunity includes the activities of private standard-setting bodies that operate under a government supervision. At the same time, the antitrust immunity also extends to the participants’ conduct during the standardization process. The participants’ effort to alter the outcome of the process performed by a public body is protected from the antitrust liability by the doctrine in the *Noerr* case. The immunity of SSOs based outside of the United States are, on the other hand, based on the Foreign Sovereign Immunities Act, which determines that public acts of foreign governments have sovereign immunity. The Supreme Court nonetheless clarified that the immunity does not apply to private SSOs that do not operate under government supervision, even if their standard are regularly implemented in the legislation (*Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 499-500 (1988)).

country to country, and so does their degree of dependence from the government. In some countries (for example, France), the SSO has the status of a public body. The adopted standards are considered administrative acts, and compliance with them is mandatory for all market players. In other countries (for instance the United Kingdom and Germany), the SSO has no legislative power. The decision to produce goods in compliance with the standard set by those SSOs is therefore left to the market, unless provided differently by a specific legal enactment.

Several SSOs operate at the regional level. In the EU, for example, the standardization activity lies in the hands of the three organizations: the European Committee for Standardization (CEN), European Committee for Electro-technical Standardization (CENELEC), and the European Telecommunications Standards Institute (ETSI).⁸⁵ Each organization is active in its own field. CENELEC is responsible for standardization in the electro-technical area, ETSI is in charge for the standardization in field telecommunications, whereas CEN is active in multiple sectors, except in the ones covered by the other two organizations. Member states play an important role in the activities of CEN and CENELEC. ETSI, on the contrary, is an industry-based SSO and its work is mainly driven by private parties. The European Commission can request each of the three organizations to develop specific standards in support of its policies. Most standards are nevertheless adopted at the request of industry, and therefore in the private sphere. In the latter case, the compliance with those standard is voluntary.

Three major organizations are involved in the development of standards at the international level. The International Organization for Standardization (ISO) is the world's largest developer and publisher of international standards.⁸⁶ Other important international SSOs are the International Electro-technical Commission (IEC) and the International Telecommunication Union (ITU), in charge of the standardization in the electro technical and the telecommunications fields respectively. The adherence to international standards is voluntary. The level of compliance is nonetheless often high.

⁸⁵ The ESOs have been recognized as formal European Standard Organizations (ESOs) by the Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998, Laying Down a Procedure for the Provision of Information in the Field of Technical Standards and Regulations and of Rules on Information Society Services (OJ L 204 of 21.07.1998) [hereinafter Directive 98/34/EC].

⁸⁶ International Organization for Standardization (ISO), <http://www.iso.org/iso/about.htm> (last visited September 2013).

Standard developed by international SSOs frequently become a market requirement. On some occasions, international standards are implemented in national regulations, and in this way, compliance with them becomes mandatory.

An increasing number of standards are set by informal SSOs that do not follow in any of the mentioned categories. In the information and communication technologies (ICT) sector, for instance, 60% of the standards applied in the EU are developed through an informal standardization procedure.⁸⁷ Informal SSOs play a particularly relevant role in the United States, where there is no central government agency responsible for standardization comparable to the European organizations.⁸⁸ The work of private SSOs has been promoted in 1995, by the adoption of the National Technology Transfer and Advancement Act (NTTAA), which required federal agencies to use—to the extent possible—consensus-based voluntary standards as alternatives to the standards developed only for government use.⁸⁹

Past cases showed that antitrust concerns with the SEPs arose in relation to standards set at any level. In *Rambus* (discussed in chapter 1) for example, the standard was set by the JEDEC, a U.S.-based private SSO. Other cases concerned patents essential for standards set by a regional SSO (for example ETSI), or by an international one (for example ITU). The common feature of these standards was their wide market implementation. The use of standards adopted at the regional level is, in fact, not necessarily limited to the borders of the region. Some of the standards adopted at the regional level enjoy a truly international acceptance. Therefore, anticompetitive concerns are not tied to the geographical level at which the standard has been set, but rather are related to the market success of the standard. Anticompetitive concerns are particularly likely to arise where adherence to the standard is a *de facto* requirement for the participation in the market.

87 EUROPEAN COMMISSION, White Paper, Modernising ICT Standardisation in the EU – The Way Forward, COM (2009) 324 final (2009).

88 The American National Standards Institute (ANSI) acts as an overall coordinator and certifier of the so-called voluntary national standards system. ANSI oversees the creation of standards, but it does not adopt the standards itself. Not all SSOs are however members of ANSI.

89 The NTTAA was enacted in response to private sector concerns that federal agencies were developing government standards when similar or identical standards already existed in the private sector, or that such standards could be developed in the private sector with appropriate government input. Private sector stakeholders claimed that the government's reliance upon government-unique standards greatly increased procurement costs and severely limited the government's ability to obtain off-the-shelf and state-of-the-art technology.

1.3. De facto standards

Although manufacturers have no duty to produce their goods in compliance with voluntary standards, some of these standards enjoy wide market acceptance. There are several factors that may stimulate manufacturers to produce their goods in compliance with a voluntary standard.

Manufacturers might derive important benefits from complying with a voluntary standard. For example, compliance with a quality standard may be a tool for a manufacturer to convey to its consumers information about the quality of the good and differentiate the product from those of its competitors.⁹⁰ Manufacturers might also decide to implement quality standards in order to avoid possible liability claims. In the case of interoperability standards, which allow one product to work together with those of other manufacturers, the standard generally increases the value consumers attribute to the product. Introducing a product into a market where the standard is already established often results in a greater acceptance and faster uptake of the product. Consequently, most firms will comply with a standard adopted in the market, rather than develop their own alternative.⁹¹

In some circumstances, a standard might be so widely adopted by the market that compliance with it becomes a *de facto* requirement for the participation in the market—a *de facto* standard.⁹² *De facto* standards are particularly likely to arise in markets with strong network effects, where interoperability among products plays a fundamental role.⁹³ Where network effects are strong, the market often “tips” towards an individual standard, which becomes the predominant market solution.⁹⁴ Even if

90 G. Howells, *The Relationship Between Product Liability and Product Safety — Understanding a Necessary Element in. European Product Liability Through a Comparison with the US Position*, 39 WASHBURN. L J 305 (2000).

91 M. L. Katz & C. SHAPIRO, *Network Externalities, Competition, and Compatibility*, 75 THE AMERICAN ECONOMIC REVIEW 3 (1985) (discussing private and social incentives for producing goods in compliance with voluntary (interoperability) standard).

92 The word “*de facto*” is a Latin expression that means “by fact”. In the legal context is often used to describe something that is a rule by fact, although not necessarily mandated by law.

93 P. Anderson & M. L. Tushman, *Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change*, 35 ADMINISTRATIVE SCIENCE QUARTERLY, 604 (1990).

94 Katz & C. Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AMERICAN ECONOMIC REVIEW 424 (1986); P. Van Eecke & M. Truysens, *Standardization in the European Information and*

alternative standards exist, they often retain only a marginal relevance. In such circumstances, a single manufacturer risks losing a significant number of its customers if it decides to produce goods that do not comply with a *de facto* standard. The choice of whether or not to comply with the winning standard thus becomes a choice between adoption of the standard or exit from the market.⁹⁵

An example of a *de facto* standard is the Global System for Mobile communication (GSM) standard. The standard was developed by ETSI in the early 1990s as a voluntary standard.⁹⁶ Nonetheless, in 2009, 80% of mobile handsets were based on the GSM standard, which allowed mobile devices to interoperate among each other.⁹⁷ Alternative standards did exist. Compliance with the GSM standard was nevertheless a *de facto* requirement for mobile manufacturers entering the EU market.⁹⁸ A device that did not comply with the GSM standard was unable to interoperate with the large number of handsets that relied on the GSM standard, and was consequently of low value to a consumer.⁹⁹

When compliance with the standard is *de facto* mandatory, the standard becomes—in economic terms—a bottleneck. Market access is contingent on the access to the standard. This might give rise to several concerns, particularly if the standard relies on a technology protected by a patent right. In such circumstances, the SEP owner not only controls the access to the SEP and the standard in question, but also the access to the entire market. This might in turn give rise to anticompetitive practices.

Technology Sector: Official Procedures on the Verge of Being Overhauled, 5 SHIDLER J. L. COM. & TECH 11 (2009).

95 C. F. Kemerer, C. Z. Liu, S. A. Slaughter, & M. D. Smith, *Standards Competition in the Presence of Digital Conversion Technology: An Empirical Analysis of the Flash Memory Card Market*, Heinz Research (2010), available at <http://repository.cmu.edu/cgi/viewcontent.cgi?article=1057&context=heinzworks>

96 European Telecommunications Standards Institute (ETSI), <http://www.etsi.org/technologies-clusters/technologies/mobile> (last visited December 2013).

97 Wikipedia, Mobile Telephony, available at http://en.wikipedia.org/wiki/Mobile_telephony (last visited December 2013).

98 See, e.g., Patrick Traynor, CS 8803 - Cellular and Mobile Network Security: GSM - In Detail (Sep. 2012), available at <http://www.cc.gatech.edu/~traynor/cs8803/f12/slides/lecture06-standards.pdf> (maintaining that the GSM standard “is the de facto standard for wireless communications”).

99 The situation was different in the US where the GSM standard competed heavily with other standards, such as the Code Division Multiple Access standard (CDMA).

2. ANTITRUST CONCERNS WITH INDUSTRY STANDARDS

2.1. *Traditional antitrust concerns: collusion and foreclosure*

Competition authorities and courts have been traditionally suspicious of standard-setting activities. The standardization process necessarily involves competitors meeting to discuss their future behavior in the market. There is an inherent risk that participants will use the standardization process for anticompetitive purposes. Participants might collude on price or output. They might also use the standardization process as a tool to foreclose competitors from the market.¹⁰⁰ By restricting the access to the standardization process, or making a biased selection of technologies, participants can exclude rivals' technologies from the standard.¹⁰¹ Further, if the standard becomes a *de facto* requirement for the participation in the market, participants might use the standard as a tool to foreclose companies from the downstream market. It is thus clear that standardization activities might be considered unlawful under competition law, particularly under Article 101 TFEU in the EU and Section 1 of the Sherman Act in the United States.¹⁰²

Economists have nonetheless explained that standardization agreements have also substantive procompetitive effects.¹⁰³ By allowing a combined use of products from different manufacturers, standards can increase consumer choice and convenience.¹⁰⁴ This is particularly true in network markets, where the value that an individual consumer derives from a product increases with the number of consumers that use the same standard.¹⁰⁵ Standards can also decrease switching costs and

100 Foreclosure refers to cases where an undertaking or a group of undertakings denies to its rival or rivals the access to a needed input, source of distribution, or market.

101 EUROPEAN COMMISSION, X-Open Group § No L 35 (OJ 1986).

102 For EU see: EUROPEAN COMMISSION, Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation Agreements, Official Journal C 003 06/01/2001, 165 (2001). For US see: Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500 (1988); Radiant Burners, Inc. v. Peoples Gas Light & Coke Co., 364 U.S. 656, 660 (1961); American Society of Mechanical Engineers v. Hydrolevel Corp., 456 U.S. 556, 571. (1982).

103 See, e.g., J. Farrell & G. Saloner, *Standardization, Compatibility, and Innovation*, 16 THE RAND JOURNAL OF ECONOMICS 70 (1985); H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87 (2007).

104 H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87 (2007).

105 AMERICAN BAR ASSOCIATION, SECTION OF ANTITRUST LAW, A YEAR IN THE LIFE OF A HIGH TECH STANDARDS SETTING ORGANIZATION (2002) available at <http://apps.americanbar.org/antitrust/at-committees/at-ip/pdf/past-prog/04-25-02.pdf>.

prevent consumers from being locked into a specific system.¹⁰⁶ Further, when a standard reduces differentiation, it generally tends to intensify price competition.¹⁰⁷ Standards have also positive effects for producers. They allow economies of scale to occur, with a consequent reduction in the unit cost of production. Standards also allow producers to shift their resources to the development of end-user applications, instead of focusing their resources on establishing competing formats.¹⁰⁸ In this way, standardization activities can foster innovation. Finally, international standards play a crucial role in facilitating trade among states, an effect that is particularly welcomed in the EU context, given its positive effects on the development of the internal market.

Principles of economic theory are reflected in the competition law approach towards standard setting. Both in the EU and in the United States, competition authorities and courts have recognized that standard setting can have considerable procompetitive effects and it might be consistent with the goals of competition. In the EU, the Commission has expressed such view in the *Guidelines on the Applicability of Article 101 of the EC Treaty to Horizontal Cooperation Agreements* (2001 Guidelines), where a special section was devoted to standardization agreements.¹⁰⁹ The Commission emphasized that when the standardization process is conducted in respect with specific procedural requirement (such as unrestricted and transparent participation) the standardization agreement is unlikely to have considerable anticompetitive effects. It is consequently unlikely to trigger the application of Article 101 TFEU.¹¹⁰ Also U.S. courts have recognized that standardization agreements might have substantive procompetitive effects. They consequently clarified that a

106 A. Soininen, *Patents and Standards in the ICT Sector: Are Submarine Patents a Substantive Problem or a Red Herring?* INTERNATIONAL JOURNAL OF IT STANDARDS AND STANDARDIZATION RESEARCH § 5 (2007).

107 R. Schmalensee, *Standard-Setting, Innovation Specialists, and Competition Policy*, 57.3 THE JOURNAL OF INDUSTRIAL ECONOMICS 526 (2009).

108 H. SCHEPEL, THE CONSTITUTION OF PRIVATE GOVERNANCE: PRODUCT STANDARDS IN THE REGULATION (Hart. 2005).

109 EUROPEAN COMMISSION, *Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements* § C (2010) 9274/2, ¶ 263 (2010).

110 EUROPEAN COMMISSION, *Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation Agreements*, C 3/2 2001/C 3/02, ¶ 163 (2001). Even standardization agreements that do not meet the criteria of the safe harbor, can be still exempted under 101(3) TFEU (at the time 81(3) EC), if they have economic benefits, the restrictions they impose are indispensable, and they do not result in the complete elimination of competition (*id.* at 169-175).

standardization agreement is not a *per se* violation of antitrust law, but its effect can be evaluated under the rule of reason.¹¹¹

2.2. *New antitrust concerns: standard essential patents*

Although the risk of collusion and foreclosure is still present, the legal framework seems to strike an appropriate balance between facilitating procompetitive cooperation and deterring collusion. In the 2000s, however, the use of standards raised new concerns. The focus was not on the collusive practices among participants, but rather on unilateral conducts.¹¹² Concerns have arisen particularly in relation to the conduct of SEP owners. The next paragraphs will first explain the main feature of SEPs, and then explain the possible opportunistic conducts that may arise in relation to their use.

2.2.A. Standard essential patents

Industry standards often rely on technical solutions that are not available in the public domain, but are protected by patent rights. Several reasons might motivate the SSO to implement a patented technology in the standard. For example, a standard may rely on a patented technology, because the technology provides a unique solution for a specific function. It is also possible that alternative solutions existed, but that a specific technology was selected and implemented in the standard, because it was considered the optimal way to perform a specific function, in terms of quality, cost efficiency or other factors. Once a patented technology has been selected and implemented in the standard, the use of the patent covering that technology becomes essential—a SEP.

111 *See, e.g., Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 US 492, 501 (1988) (“When ... 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. It is this potential for pro-competitive benefits that has led most lower courts to apply rule-of-reason analysis to product standard-setting by private associations”).

112 *See, e.g., R. Dagen, Rambus, Innovation Efficiency, and Section 5 of the FTC Act*, 90 BOSTON UNIVERSITY LAW REVIEW 1479, 1484 (2010) (“Until recently, antitrust issues involving standard setting have involved collusion among competitors. [...] More recent attention has focused on anticompetitive unilateral conduct.”).

The concept of SEPs is strictly related to the FRAND commitment. Just like any other patent owner, the SEP owner would have, in principle, the statutory right to exclude third parties from the use of its patented technology. It could thus decide to refuse to license its SEP to manufacturers interested in producing standard-compliant goods, and in this way, make the standard inaccessible. In order to avoid this outcome, SSOs generally adopt specific rules that aim to facilitate the access to the standard. SSOs generally require the participant of the standardization procedure to disclose upfront the existence of any patent that might be relevant for the discussed standard,¹¹³ and clarify whether it is willing to license the patent on FRAND terms.¹¹⁴ Only if the owner agrees to license its patent on FRAND terms, will the SSO typically consider implementing the patented technology in the standard. If, on the contrary, the patent owner refuses to license its technology under the required terms, the SSO will have to redesign its standard in a way to exclude the SEP in question.¹¹⁵

FRAND commitments have allowed the successful development of industry standards for several decades. Although standards often relied on technologies protected by patent rights, the presence of SEPs did traditionally not represent a major limitation. SEP owners and manufacturers of standard-compliant goods have been generally able to come to a mutual agreement on licensing terms for the SEPs. In the last decade, however, the situation has changed. There have been an increasing number of disputes concerning SEPs. As explained in this part, there is an increasing concern that the SEP owner might engage in opportunistic practices which are harmful for the manufacturers, the standardization process, and ultimately the consumers.

113 *See, e.g.* ETSI Intellectual Property Rights Policy, *supra* note 9, § 4.1; International Electrotechnical Commission, International Organization for Standardization, International Telecommunication Union [IEC/ISO/ITU], Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC, § 3 (Feb. 24. 2012), *available at* http://www.itu.int/dms_pub/itu-t/oth/04/04/T04040000010003PDFE.pdf [Guidelines for the ITU patent policy]

114 *See, e.g.* ETSI Intellectual Property Rights Policy; some SSOs, as for instance the World Wide Web Consortium (W3C), have stricter rules and require the patent owners to agree to license the technology on a royalty free basis, if implemented in the standard. (World Wide Web Consortium [W3C], 3WC Patent Policy Overview, § 2 (Feb. 4th 2004), *available at* <http://www.w3.org/2004/02/05-patentsummary.html> [hereinafter 3WC Patent Policy]).

115 *See, e.g.* The International Telecommunication Union [ITU], Common Patent Policy for ITU-T/ITU-R/ISO/IEC, § 8.1., *available at* <http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx> (last visited on June 2, 2013) [hereinafter ITU Patent Policy]; 3WC Patent Policy, *supra* note 114, §2.

2.2.B. The SEP owner's opportunism

The SEP owner might engage in various opportunistic practices. Although those practices differ among each other, it is possible to differentiate two major groups: (i) the SEP owner's deceptive behavior during the standardization process, and (ii) the strategic use of SEPs.

The first group includes the SEP owner's deceptive practices during the standardization process. Such practices arise *ex ante*, that is, before the SSO has selected the technologies to be implemented in the standard. The SEP owner might, for instance, make a false statement during the standardization process, by claiming that it does not own patents relevant for the discussed standard. Alternatively, the SEP owner might make no false statement, but might hide the existence of its patent by remaining silent about its patent rights. It is also possible that the SEP owner discloses the existence of its patent, but falsely commits to license its patented technologies on FRAND terms if implemented in the standard. In this way, the SEP owner might persuade the SSO to implement its technology in the standard. The different forms of deception generally aim at achieving a common goal: obtaining the implementation of the patented technology in the standard.¹¹⁶

The SEP owner's deceptive conduct has several undesirable effects. Most importantly, it might subvert the outcome of the standardization process. By

¹¹⁶ There are other possible deceptive conducts that the SEP owner might undertake during the standardization process, both collective and unilateral. Participants in a standard setting procedure might for instance agree to threaten a patent owner with a boycott of its technology, unless the owner agrees to make it available for free or at below-competitive royalties. (*See, e.g., Sony Electronics, Inc. v. Soundview Technologies, Inc.*, 157 F.Supp.2d 180 (D.C. D Connecticut 2001).) Over-disclosure of SEPs might be also considered a deceptive conduct. The SEP owner might intentional claim more patents to be essential than they actually are, and in this way to obtain bargaining power in the licensing negotiations. A company that has a large portfolio with hundreds of patents is more likely to obtain favorable cross-licensing conditions than the licensee with a limited patent portfolio or no SEPs at all. Most SSOs do not check whether the declared patents are valid and essential: it hence possible that there is higher number of patented declared to be essential than in practice is. In 2005, Goodman and Myers examined patent and patent applications declared essential for the 3GPP and 3 GPP standards, and found that only about 21 % of the declared patents were actually essential. Although the research was criticized on several grounds, it nonetheless indicate the serious problem of over-disclosure of SEPs. (R.A. Myers & D.J Goodman, *3G Cellular standards and patents*, *IEEE Wire-lessCom2005* (2005), available at <http://eeweb.poly.edu/dgoodman/wirelesscom2005.pdf>. For criticism see: C. De Meyer & D. L. Martin, *Patent counting, a misleading index of patent value: A critique of Goodman & Myers and its uses* (De. 4, 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=949439). For reasons of space, I will focus on the three identified types of deceptive acts, which constitute the major concerns today. Some of the general conclusions might nonetheless apply also to deceptive conducts that have not been directly discussed in the thesis.

conferring incorrect information that a specific technology is available at no cost, or on FRAND terms, the SEP owner might induce the SSO's participants to implement its technology in the market, whereas different technologies could have been selected for the standard if accurate information were made available to the SSO's participants. The deception might thus distort competition in the technology market, that is, in the market where technologies compete for the implementation in the standard.

The second type of conduct includes the SEP owner's strategic licensing practices. This kind of conduct takes place *ex post*, after the patented technology has been implemented and the use of the patent becomes essential. At this point, the SEP owner becomes an unavoidable trading party for all manufacturers interested in the production of standard-compliant goods. This might open the door to opportunistic practices. The SEP owner might for instance refuse to license its SEP, and in this way foreclose a manufacturer's access to the standard. Alternatively, the SEP owner might license its SEP, but require the manufacturer to pay royalties that are considered excessive to the value of the SEP. The SEP owner might also impose on the manufacturer other onerous licensing conditions, such as mandatory cross licensing or non-assertion clauses. Finally, the SEP owner might also impose licensing conditions that harm the rival's ability to compete in markets that are related to the standard. For example, by licensing its SEP only at exorbitant royalties, the SEP owner can increase rivals' costs and in this way obtain a competitive advantage in the product market.¹¹⁷

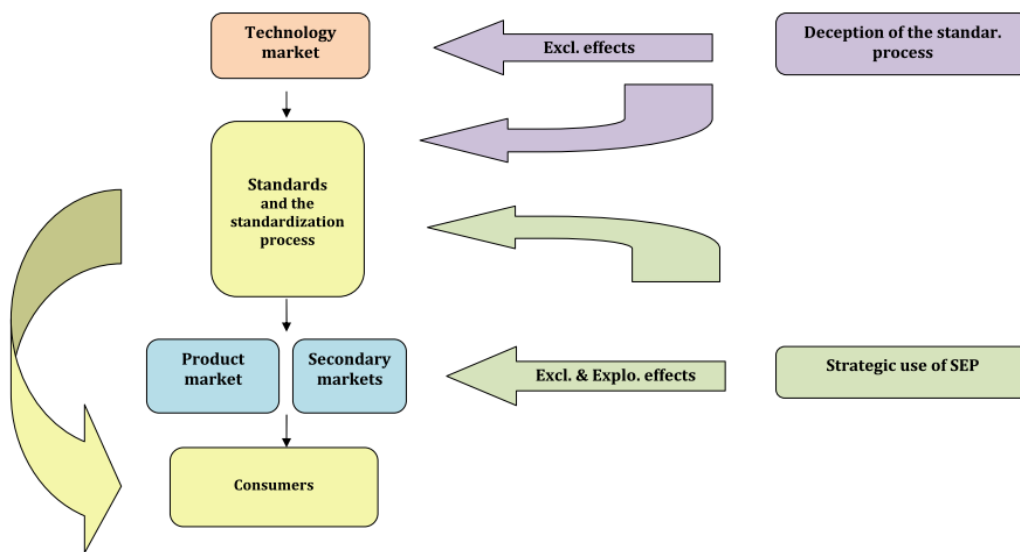
The SEP owner's strategic licensing practices might have thus, negative welfare effects. First, there might be exclusionary effects, if by refusing to license its SEP, the SEP owner is able to exclude manufacturers from the downstream market. Second, there might be exploitative effects, whereby the SEP owner is able to extract rents from manufacturers. Third, the SEP owner might use the SEPs in a way that affects the rivals' ability to compete in a secondary market that is related to the standard.

The two types of conduct (the SEP owner's deceptive behavior during the standardization process, and the imposition of strategic licensing conditions) impose undesired effects on different markets. On one hand, the SEP owner's deceptive

117 Statement of the DOJ Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd. (2012).

conduct during the standardization process affects competition in the technology market—the market where technologies compete for implementation in the standard. The SEP owner’s strategic licensing practices, on the other hand, mainly affect the product market. Those effects are graphically represented in Picture I.

PICTURE I: EFFECTS THAT THE SEP OWNERS’ OPPORTUNISTIC PRACTICES MAY HAVE ON
MARKETS



Both types of opportunism might have, nonetheless, broader negative consequences. Some commentators suggested that the SEP owner’s opportunism might undermine the success of the standard. Manufacturers might be hesitant to produce their goods in compliance with the standard, if they fear that the SEP owner will hold them up and try to extract excessive royalties. The SEP owner’s deceptive conduct might also undermine the confidence in standard-setting procedure, and decrease the participants’ incentives to take part in further standardization activities. Further, commentators suggest that patent holdup might lead to the problem of “royalty stacking.” A final product relies in fact on several SEPs. A manufacturer of a standard-compliant good must thus pay the royalties for all SEPs “stacked” together. Royalty stacking might consequently “magnifies the problems associated with . . .

patent holdup,”¹¹⁸ if the cumulative royalties for all SEPs included in an individual standard are too high. Finally, the SEP owner’s opportunism might also harm consumers. Patent holdup might harm consumers directly if excessive prices are passed on them. Additionally, an indirect harm might arise if, by harming the success of the standard and of the standardization process, the SEP owner’s opportunism deprives consumers of the benefits brought by the standardization process.

2.3. *The criticisms of the holdup theory*

The patent holdup theory is controversial and several commentators have questioned its plausibility. They suggest that, although the SEP owner’s opportunism is theoretically possible, it rarely occurs in practice.¹¹⁹ Commissioner Wright notes that “the decision to engage in hold-up results in short-term gains than can easily be overwhelmed in a ‘repeated game’ setting.”¹²⁰ Sidak maintains that “patent holdup is a conjecture, not a real-world fact.”¹²¹ Geradin similarly argues that a SEP owner faces several vertical, horizontal and dynamic constraints that prevent the SEP owner from imposing opportunistic licensing conditions on manufacturers.¹²² Therefore, although these commentators acknowledge that the SEP holder could behave opportunistically, they argue this rarely occurs in practices.

Commentators also argue that there is little evidence that cases of (alleged) SEP owner’s opportunism have had a negative effect on standards, on the standardization process, or consumers. Commissioner Wright for instance maintained, “I am not aware

118 M. A. Lemley & C. Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS LAW REVIEW 1991, 1993 (2007).

119 See, e.g., D. Geradin & M. P. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION JOURNAL 101 (2006); E. Dorsey & M. R. McGuire, *How the Google Consent Order Alters the Process and Outcomes of FRAND Bargaining*, 20 GEO. MASON L. REV. 979 (2013); G. Langus, V. Lipatov & D. Neven, *Standard Essential Patents: Who is Really Holding Up (and When)?*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 253 (2013); J. D. Ratliff & D. L. Rubinfeld, *The Use and Threat of Injunctions in the Rand Context*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 1 (2013).

120 J. D. Wright, Commissioner, Fed. Trade Comm’n, Remarks at The Inaugural Academic Conference: The Commercial Function of Patents in Today’s Innovation Economy, George Mason University School of Law (Sep. 12, 2013), at 20.

121 G. Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931, 1021 (2013).

122 D. Geradin, *Abusive Pricing in an IP Licensing Context: An EC Competition Law Analysis*, EU Competition Law and Policy Workshop/Proceeding, at 6-7 (2007), available at [http://www.eui.eu/RSCAS/Research/Competition/2007\(pdf\)/200709-COMPed-Geradin.pdf](http://www.eui.eu/RSCAS/Research/Competition/2007(pdf)/200709-COMPed-Geradin.pdf).

of any reliable evidence that indicates royalty rates and final end-use prices are higher for standardized technologies.”¹²³ Abramson and Mariniello emphasize that SEP owners (including NPEs and practicing entities) are generally interested in the widest implementation of the standard, and are consequently not interested in imposing licensing fees that could slow down the adoption of the standard or harm its success.¹²⁴ Commentators maintain that empirical evidence shows a trend opposite to holdup. The telecommunications industry—an industry that relies extensively on standards, and where disputes with SEP owners are most common—had since 2005 an impressive growth that was rarely matched in other industries.¹²⁵ There seems to be hence no evidence of a serious market failure due to patent holdup.

Finally, some commentators have also criticized the negative approach towards NPEs. Mann, Geradin and other authors have pointed out that the presence of NPEs does not necessarily have negative effects on the market. NPEs can increase competition in the up-stream market, given that the entry costs incurred if entering only in the upstream market might be substantively lower than the one incurred when starting an entire production process.¹²⁶ NPEs can also provide liquidity to the market for patents, and through this, they stimulate innovation.¹²⁷ Finally, Schmalensee and Schmidt point out that NPEs might tend to charge lower royalties, given that on difference of practicing entities, they do not have the incentives to increase rivals’ cost.¹²⁸

123 Joshua D. Wright, Commissioner, Fed. Trade Comm’n, Remarks at The Inaugural Academic Conference: The Commercial Function of Patents in Today’s Innovation Economy, George Mason University School of Law (Sep. 12, 2013), at 22.

124 B. Dean Abramson, *The Patent Ambush: Misuse Or Caveat Emptor?*, PTC RESEARCH FOUNDATION (2011). M. Mariniello, *Fair, reasonable and non-discriminatory (FRAND) terms: a challenge for competition authorities*, 7 JOURNAL OF COMPETITION LAW & ECONOMICS 523 (2011).

125 D. Geradin, *Moving Away from High-Level Theories: A Market-Driven Analysis of FRAND in the Context of Standardization*, ANTITRUST BULLETIN (forthcoming 2014).

126 D. Geradin, A. Layne-Farrar† and A. J. Padilla, *Elves or Trolls? The Role of Non-Practicing Patent Owners in the Innovation Economy*, Industrial and Corporate Changes (2011); R. J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, 83 TEXAS LAW REVIEW 961 (2005).

127 A. Layne-Farrar & K. M. Schmidt, *Licensing Complementary Patents: “Patent Trolls”, Market Structure, and “Excessive Royalties”*, Discussion, 15 GOVERNANCE AND THE EFFICIENCY OF ECONOMIC SYSTEMS (2009); J. F. McDonough, III, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 EMORY LAW JOURNAL 189 (2006).

128 R. Schmalensee, *Standard-Setting, Innovation Specialists, and Competition Policy*, 57.3 THE JOURNAL OF INDUSTRIAL ECONOMICS 526 (2009); K. Schmidt, *Licensing Complementary Patents: “Patent Trolls”, Market Structure, and “Excessive” royalties*, Discussion Paper 275 (2009), available at <http://www.sfbtr15.de/uploads/media/275.pdf>.

Therefore, there is a considerable disagreement in the legal and economic literature with respect to the likelihood that patent holdup will arise in practice, and what consequences it might have for the standard, the standardization process, and ultimately consumers.

3. INDUSTRY DEVELOPMENTS AND THE ROLE OF COMPETITION LAW

Before starting the legal analysis, it might be useful to discuss some of the most important developments that took place in industries where the use of SEPs has become particularly controversial. Some of the changes might provide a possible explanation for the increased number of disputes related to SEPs.

The inclusion of patented technology in industry standards is not a new phenomenon. Already in the past, standards relied on technologies covered by patents. However, the inclusion of patented technologies in standards did not traditionally represent a major source of concern. In industries involving the production of complex technologies,¹²⁹ which rely on multiple patented technologies, patent owners did not assert normally their patents in an offensive way. Patent licensing did not represent a major source of income.¹³⁰ Patents were used as a defensive tool to secure protection against infringement suits from other patent owners, or to block rivals from patenting related inventions. Patents were also used a bargaining tool in cross licensing negotiations.¹³¹ As a result, in markets of complex products, there were relatively few patent infringement suits related to SEPs. Nonetheless, this pattern has gradually

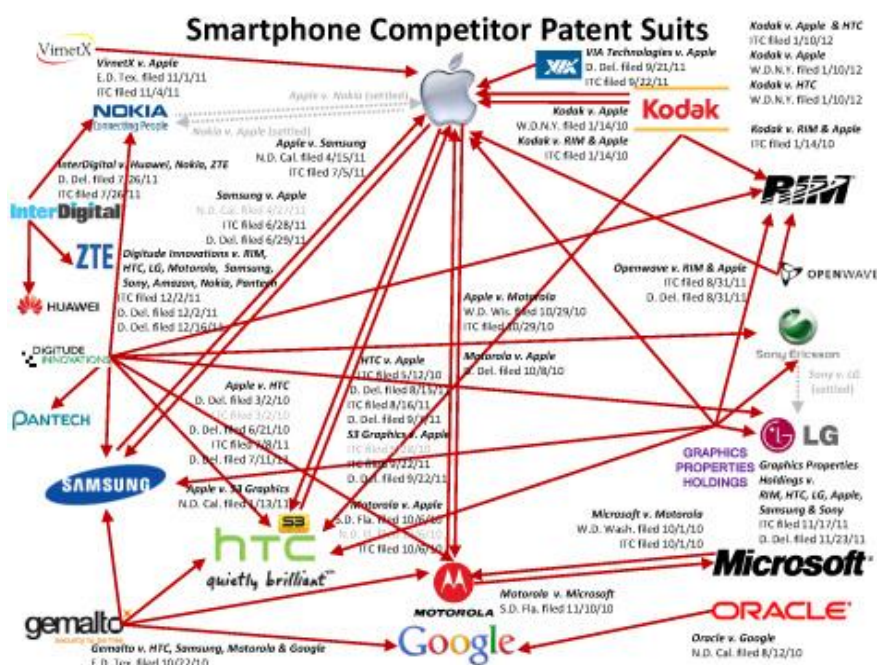
129 The distinction between the complex and simple technologies was suggested by Cohen, Nelson and Walsh. Complex products are those comprised of numerous separately patentable elements, versus relatively few elements in the case of simple products. New drugs are normally protected by a single patent. In contrast, electronic products tend to be comprised of a larger number—often hundreds—of patentable elements and, hence, are considered complex. (W. M. Cohen, R. R. Nelson, & J. P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)*, NBER Working Paper Series 7552, at 21 (2000).

130 Choen, Nelson, & Walsh performed a survey on the how firms use patents across industries. According to the survey only ten industries reported licensing revenue as a motive for patenting. These are printing/publishing, petroleum products, drugs, steel, metal products, motors/generators, semiconductors, communication equipment, TV/radio, and aerospace (*id.* at 21).

131 F. M. Scott-Morton, Deputy Assistant Attorney General For Economic Analysis, *The Role of Standards in the Current Patent Wars* (2012), Presented at Charles River Associates Annual Brussels Conference *available at* <http://www.justice.gov/atr/public/speeches/289708.pdf> (“[T]he natural outcome was a cross-license at low royalty rates. Litigation was often not a practical way to gain advantage because the other side could retaliate symmetrically”).

changed. Particularly in the mobile handset industry (including smartphones and tablets), SEPs are enforced more aggressively, and litigation is more common.¹³² We are now observing what has been defined by some commentators as one of the biggest patent wars, where almost every company active in the mobile device industry is involved in one or more litigations, often involving claims about SEPs (see Picture II).¹³³

PICTURE II: PATENT WAR IN THE MOBILE INDUSTRY



Source: Droid Matters, <http://www.droidmatters.com/news/smartphone-patent-lawsuits/> (last visited Dec. 2012)

Although it is difficult to state what the exact reasons for a more assertive use of SEPs are, we can observe some important market developments which can explain—at least partially—the change in the enforcement practice related to SEPs. First, products in technology

132 C. Shapiro, *The Design and Use of Patents*, IESE-BBVA Lecture (2007), available at <http://faculty.haas.berkeley.edu/shapiro/madrid.pdf> (discussing the general trend of a stronger enforcement of patents).

133 See, e.g., D. Rowinski, The Mobile Patent Wars: Are We Ready for This to Go Thermonuclear? (Feb. 14, 2012), available at <http://www.readwriteweb.com/mobile/2012/02/the-mobile-patent-wars-are-we.php>.

industries such as mobile handsets, increasingly rely on patented technologies.¹³⁴ Today, an individual standard, such as the 3G standard, might rely on hundreds or even thousands of patents, all (declared) essential for the production of a standard-compliant good.¹³⁵ Although a high number of SEPs does not provide an explanation for a more aggressive use of SEPs, it certainly makes infringement—and consequently litigation—more likely.

Second, SEPs are increasingly used as a tool to generate income. This can be attributed partly to NPEs, which have increased their legal actions against infringers.¹³⁶ Historically, NPEs emerged as result of the information technology bubble in the 1990s. The income generated from the stock market has been often invested in innovation activities, which has resulted in an increased number of inventions protected by patent rights. As the bubble burst, many companies lost their capital and ended up having large patent portfolios. A market where patent rights were traded as commodities started to develop, leading to the emergence of companies that focused exclusively on enforcement of patent rights. NPEs have now become a common business structure in industries, such as the mobile-device sector. Given their business structure, NPEs, irrespective of whether they are involved in the innovative process, or if they focus merely on the enforcement of their patent portfolio (patent assertion entities—PAEs), are not interested in using SEPs for defensive purposes or as a bargaining tool in a cross-licensing negotiation. Rather, they use their patents as a tool to generate income by licensing it to downstream producers. Consequently, a higher number of NPEs is likely to result in a more assertive use of SEPs.

At the same time, also practicing entities have been making an increasingly assertive use of SEPs. This might be partially attributed to the changes in the market structure that have arisen in the last decade. Companies such as Nokia, Motorola, and Ericsson were in past the major players in the market for mobile handset. They were

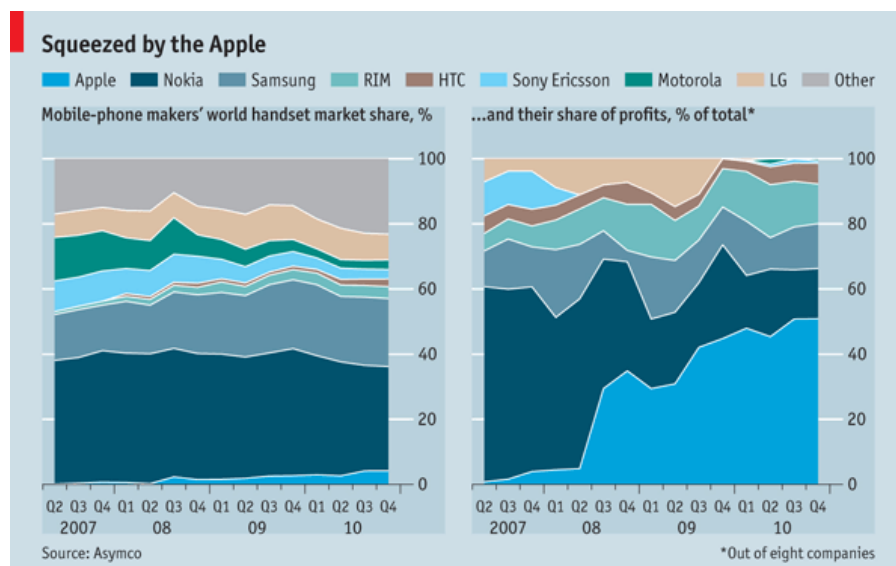
134 M. A. Lemley, *Ten Things to do About Patent Holdup of Standards (and One Not To)*, 48 BOSTON COLLEGE LAW REVIEW 149 (2007).

135 *See, e.g.*, Submission by CISCO, Certain Wireless Communications Devices, Portable Music and Data Processing Devices, Computers, and Components Thereof, Investigation No. 337-TA-745 and Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof, Investigation No. 337-TA-753, § 1 (June 7, 2012), *available* at <http://essentialpatentblog.com/wp-content/uploads/2013/01/Cisco-Public-Interest-Statement-337-TA-752.pdf>.

136 *Litigation Over Time*, Patent Freedom (Jan 2014), *available* at <https://www.patentfreedom.com/about-npes/litigations/> (reporting that patent lawsuits involving NPEs have increased on average 22 percent per year from 2004 to 2014).

also the major innovators in the industry, and contributors of technologies to the standards developed by SSOs. They owned significant patent portfolios, generally including a significant number of SEPs.¹³⁷ In the last decade, however, several of these companies have lost their position in the product market (see picture III). New companies, like Apple and Microsoft, entered the market, becoming important market players. Those companies did not take part in the past standardization activities, and did not contribute their technologies to SSOs. They consequently own only a limited number of SEPs. There is understandably a strong disagreement between the SEP holders and the new entrants about the way in which SEPs should be enforced. Older market players that have extensive patent portfolios (including SEPs), typically argue in favor of strong protection of SEPs. To the contrary, companies that have only recently entered the market, and have a lower number of SEPs, argue in favor of a more interventionist approach with less emphasis on the protection of SEPs.

PICTURE III: CHANGES IN MANUFACTURERS' MARKET SHARES 2007–2010



Source: Asymco, <http://www.asymco.com/> (last visited Dec. 2013)

Further, some market players have changed their business structure in a way that favors a more assertive use of SEPs. Companies that were previously practicing

137 R. Bongard, R. Bekkers & A. Nuvolari, *An empirical study on the determinants of essential patent claims in compatibility standards*, 40 RESEARCH POLICY 1001, 1008 (2011).

their patents, and thus active in the downstream market, have exit the manufacturing business and become NPEs. Perhaps, the clearest example is Nokia, which was the major producer of mobile devices only a few years ago, and, in 2013, sold its manufacturing business to Microsoft.¹³⁸ Nokia now focuses exclusively on licensing its technologies to manufacturers of mobile devices. At the same time, there were several cases of the so-called “privateering”, where practicing companies transferred their own SEPs to NPEs, with the alleged intention to engage in patent litigation against competitors in the downstream market. A good example is the Rockstar Consortium, an organization formed by Apple, Microsoft, BlackBerry, Ericsson, and Sony, to which those companies transferred the patents that they acquired from bankrupt Nortel.¹³⁹ In the view of some commentators, Rockstar was established with the purpose to assert patents, including SEPs, against companies that compete in the downstream market.¹⁴⁰ These structural changes in market have contributed to a more assertive use of SEPs.

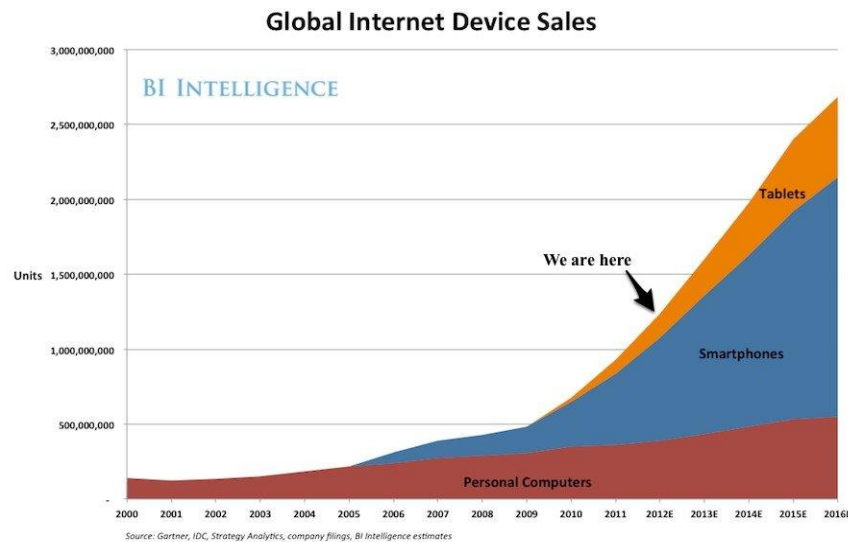
Finally, the more assertive use of SEPs can be also explained by the impressive growth the mobile industry had since 2000. New products, such as smartphones and tablets, have obtained great success, opening new markets, and have generated considerable income (see Picture IV). The mobile-handset industry, has achieved impressive growth that has been rarely observed in any other market. In other words, there is a lot of money at stake in the industry, and there is strong competition among how market players ought to divide the rents generated by growth in the market. The assertion of SEPs plays a fundamental role in the dispute on how to divide the generated revenue.

138 M. Scott, *Handset Unit Nearly Sold, Nokia Now Looks to an Uncertain Future*, N.Y. TIMES, Nov. 19, 2013, http://www.nytimes.com/2013/11/20/technology/nokia-shareholders-vote-to-sell-cellphone-unit-to-microsoft.html?_r=0.

139 G. Ng, *Apple/Microsoft Consortium Sues Google, Samsung Over Nortel Patents*, IPHONE IN CANADA, Oct. 31, 2013, <http://www.iphoneincanada.ca/news/apple-microsoft-rockstar-sues-google-samsung/>.

140 J. Mick, *Apple and Microsoft Expand Patent Trolling, Sue TWC, Cisco via Subsidiary*, DAILY TECH (Dec. 2013), <http://www.dailytech.com/Apple+and+Microsoft+Expand+Patent+Trolling+Sue+TWC+Cisco+via+Subsidiary/article33987.htm>.

PICTURE IV: SALES IN THE MOBILE-DEVICE INDUSTRY 2000-2016



Source: App Clover, <http://appclover.com/about/industry-landscape/> (Dec. 2013)

In sum, although patented technologies have been implemented in industry standards already in the past, concerns with the SEP owners' strategic conducts are a relatively new phenomena. The concerns arose when, due to the changes in the market, companies started asserting their SEPs in a more aggressive way.

THE INTERPLAY BETWEEN INTELLECTUAL PROPERTY RIGHTS AND COMPETITION LAW

The tension between competition law and patent rights is not a new issue. Courts and competition authorities have discussed on several occasions the line between the legitimate use of IPRs and an antitrust violation. The present chapter reviews the doctrines developed in past cases and tries to delineate the relationship between the two bodies of law. The aim of the chapter is to remind the reader what is settled and what is not in the relationship between competition law and patent rights.

1. PATENTS: A BRIEF INTRODUCTION

1.1. *Patent rights*

IPRs are “rights . . . that exclude non-owners for a specified duration and over a specified breadth from commercially exploiting the IPR without the owner’s permission.”¹⁴¹ IPRs protect the property of intangible goods, such as creative expressions, ideas, symbols, information, music, and design. The three best known forms of IPRs are copyrights, trademarks, and patents, although other forms of IPRs, such as trade secrets, geographical indications, and industrial designs also exist. The present thesis focuses on patent rights, as this is the most common form of IPR that is invoked in the legal issues covered in this thesis.

Patents protect inventions. In order to be patentable, the invention must fulfill specific conditions. The requirements vary from country to country. In general, however, an invention can be patented if it meets the following criteria: “[i]t must be of practical use; it must show an element of novelty, that is, some new characteristic which is not known in the body of existing knowledge in its technical field . . . [and

141 UNITED NATIONS (TRADE AND DEVELOPMENT BOARD COMMISSION ON INVESTMENT, TECHNOLOGY AND RELATED FINANCIAL ISSUES), COMPETITION POLICY AND THE EXERCISE OF INTELLECTUAL PROPERTY RIGHTS (2008).

the] subject matter must be [also] accepted as patentable.”¹⁴² An additional requirement for the patentability is the disclosure of the invention. In order to qualify for patent protection, the inventor must disclose the technical information of its invention to the patent office, and apply for protection.

Once granted, a patent confers to the owner the right to exploit the invention for a determined period of time, normally 20 years from the date of application of the patent.¹⁴³ This includes two basic prerogatives: (1) the right to exclude third parties from the use of the protected technology,¹⁴⁴ and (2) the right to set the conditions for the use of such patented technology. The patent owner can refuse to license its patented technology to other undertakings and retain its use to itself, or not use the technology at all. If the patent owner decides to license its technology, it has the right to freely determine the licensees, as well as the licensing conditions under which it will license its technology. The patent owner can thus license its patent on exclusive terms or on discriminatory licensing conditions. Those basic prerogatives are granted to all patent owners irrespective of the way in which they obtained the patent right. Firms have as much of a right to enforce an acquired patent as to enforce a patent developed internally.¹⁴⁵

The justifications for granting patent rights are well known. Together with other instruments, such as grants, subsidies and public research, patents represent a policy instrument to promote innovation and technological progress.¹⁴⁶ This innovative process results in the production of knowledge, which has the characteristic of a public good.¹⁴⁷ Knowledge is non-excludable¹⁴⁸ and non-rival,¹⁴⁹ both characteristics that

142 WIPO, http://www.wipo.int/patentscope/en/patents_faq.html#inventions (last visited July 4th 2012).

143 C. COLSTON & J. GALLOWAY, MODERN INTELLECTUAL PROPERTY LAW (Third ed. Routledge 2010).

144 This prerogative is subject only to the exceptions established by the relevant domestic and international laws. Such exceptions can be compared to what constitutes expropriation for a tangible property.

145 P. AREEDA & H. HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION, § 3A, 2nd Ed., 159 (Aspen Publ. 2002).

146 For a discussion of the virtues of patent rights over policy instruments see: D. Encaoua, D. Guellec & C. Martinez, *The Economics of Patents: from Natural Rights to Policy Instruments* (Aug. 2003), available at <http://www.nber.org/criw/papers/encaoua.pdf>.

147 For definitions of public goods see: H. R. VARIAN, MICROECONOMIC ANALYSIS, 3rd Ed, (W. W. Norton & Company 1992).

148 Non-excludable goods are goods where no one can be effectively excluded from using the good. An example of a non-excludable good is the use public lights: it is not possible to exclude individuals from the use of public lights available of the streets.

make it difficult to obtain adequate compensation. Once knowledge becomes publicly available, market participants could replicate the knowledge at low costs, and thus sell the invention at a price that equals the marginal cost. They would hence be able to capture much of the inventor's profit, leaving the inventor with little possibility to recoup its past investments. In the long run, this would lead to a situation where no one would invest in research activities.¹⁵⁰ Patents address this problem. By conferring on the patent owner the exclusive rights over the invention, they prevent others from appropriating much of the value derived from the inventions, and facilitate the inventor's compensation.¹⁵¹ In this way, patents stimulate investments in innovation and allow the development of new products that would otherwise remain undiscovered or underdeveloped.

Several authors have expressed skepticism towards claims that market forces are not sufficient to compensate innovators.¹⁵² Economists have for a long time challenged the notion that knowledge is a public good.¹⁵³ They have also rejected the argument that inventors cannot profit from their innovation in absence of a legal protection. Although these criticisms are in no way obsolete, the thesis will not go into this discussion. It will base its further analysis on the assumption that patents are a tool to stimulate innovation. The rejection of such assumption would not only require the revision of the applicability of the rules on competition law, but also the revision of the entire patent rights system.

149 A non-rival good is a good which consumption by one individual does not reduce availability of the good for consumption by others.

150 The concept of underproduction of innovation is mainly related to the theory of public goods. The economic theory explains that public goods tend to be undersupplied in a free market. The production of knowledge in the free market would be thus below what is socially desirable.

151 U.S. D.O.J. & F.T.C., *ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION* (2007).

152 The impact of patents on incentives to innovate has been questioned by several authors. For instance, Mansfield, Levin, and Scherer suggest that patent protection is important only in specific industries, most notably in the pharmaceutical one. (R. R. Nelson and J. P. Walsh W. M. Cohen, *Protecting their Intellectual Assets Appropriability Conditions and Why US: Manufacturing Firms patent (or not)*, NBER Working paper Series (2000). See also: I. HARACOGLU, *COMPETITION LAW AND PATENTS: A FOLLOW-ON INNOVATION PERSPECTIVE IN THE BIOPHARMACEUTICAL INDUSTRY* (Edward Elgar Publ. 2008); A. K. Klevorick, R.C. Levin, R.R. Nelson, & S.G. Winter, *Appropriating the returns from industrial R&D*, 3 *BROOKINGS PAPERS ON ECONOMIC ACTIVITY* 783 (1987); M. A Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 *UNIVERSITY CHICAGO LAW REVIEW* 129 (2011).

153 See, e.g., D. Encaoua, D. Guellec & C. Martinez, *The Economics of Patents: from Natural Rights to Policy Instruments* (Aug. 2003), available at <http://www.nber.org/criw/papers/encaoua.pdf>.

Even when we accept that patent rights are an essential tool to stimulate innovation, such benefits do not come without costs. A patent creates a static distortion in the market. The patent owner might be able to charge a monopoly price for its invention for the period of the patent protection. As a result, not all consumers valuing the innovation above its marginal cost will be able to buy it.¹⁵⁴ At the same time, a patent imposes a barrier to the access and to the use of knowledge. When innovation is cumulative, a patent may thus impede access to the knowledge embedded in previous inventions, and slow down technological development.¹⁵⁵ Finally, patent enforcement itself requires a large amount of financial resources that could be used for research and development itself.¹⁵⁶ The legislator has nonetheless considered the costs imposed by the patent system as justified, since it assessed that they are outweighed by the benefits arising from innovation.

1.2. Patent rights and competition law

Courts and competition authorities have recognized that patent law and competition law are complementary policies aiming at the achievement of same objectives: promotion of innovation and improvement of consumer welfare.¹⁵⁷ Both bodies of law encourage market players to offer new products and services to consumers. By preventing the unauthorized use of protected innovations, patents encourage competition by substitution, and thus stimulate dynamic competition.¹⁵⁸ At the same time, by requiring disclosure and publication of the inventions, patents stimulate the dissemination of knowledge, facilitate the development of further inventions, and encourage their commercialization. Competition law aims at keeping the market competitive. Competition among companies stimulates them to perform at their best, by offering consumers new, innovative products, and/or adopting more

¹⁵⁴ *Id.* at. 4.

¹⁵⁵ J. Bessen & E. Maskin, *Sequential innovation, patents and imitation*, No. 00-01 MIT Working Paper Department of Economics (2000), *available at* <http://www.researchoninnovation.org/patent.pdf>.

¹⁵⁶ D. Encaoua, D. Guellec & C. Martinez, *The Economics of Patents: from Natural Rights to Policy Instruments* (Aug. 2003), *available at* <http://www.nber.org/criw/papers/encaoua.pdf>.

¹⁵⁷ For the EU see: EUROPEAN COMMISSION, Guidelines on the Application of Article 81 of the EC Treaty Technology Transfer Agreements, OJ C 101 (2004). For the US see: F.T.C, To Promote Innovation: The Proper Balance Of Competition and Patent Law and Policy (2003).

¹⁵⁸ S. ANDERMAN & H. SCHMIDT, *EC COMPETITION LAW AND INTELLECTUAL PROPERTY RIGHTS, THE REGULATION OF INNOVATION* (Oxford University Press 2011).

efficient production processes.¹⁵⁹ Competition law thus promotes static and dynamic competition.

The two bodies of law nonetheless apply different tools to achieve their goals. Patent law relies on the incentive system. By limiting, for a short period of time, the competition that the invention faces in the market, patents facilitate the patent owner's compensation for the innovative contribution, and in this way, stimulate further investments in research and innovation.¹⁶⁰ Competition law, on the other hand, prohibits an undertaking's conduct that unnecessarily limits competition. In this way, competition law aims to keep the market as competitive as possible. The competitive market conditions then force undertakings to invest in innovation, with the aim to gain or maintain a strong market position.

The use of divergent tools might lead to some tensions between the two bodies of law. The conflict does not arise as a default conflict. In most cases, the exercise of a patent right does not trigger antitrust concerns.¹⁶¹ There are nevertheless situations where the exercise of a legitimately obtained patent right may impose anticompetitive effects.

In such circumstances, both EU competition law and U.S. antitrust law have recognized that patent owners are not immune to the competition law provisions, and that, in specific circumstances, competition law can limit the patent owner's freedom in exercising its patent right. The ECJ ruled that the use of a patent might degenerate in an abuse.¹⁶² Similarly, the U.S. Supreme Court clarified that "the fact that a patent is obtained does not wholly insulate the patent owner from the antitrust laws."¹⁶³ As

159 F.T.C., To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy. (2003).

160 W. CORNISH AND D. LLEWLYN, INTELLECTUAL PROPERTY: PATENTS, COPYRIGHT, TRADEMARKS AND ALLIED RIGHTS, 6th ed. (Sweet and Maxwell 2007).

161 For EU see: Case 238/87 AB Volvo v Erik Veng (UK) Ltd., ECR 06211, at 8 (1988). *See also* Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings OJ C 45/02, ¶ 75 (2009). For US see: Atari Games Corp. v. Nintendo of Am., 897 F.2d 1572, 1576 (Fed. Cir. 1990).

162 Case 24-67 Parke, Davis and Co. v. Probel, Reese, Beintema-Interpharm and Centrafarm, ECR 00055, at 72 (1968). The ECJ and the European Commission confirmed this approach in several occasions. The Directive 2004/48/EC on the enforcement of intellectual property rights, which stressed the importance of having effective means of enforcing intellectual property rights, emphasizes that the Directive should not affect the application of the rules of competition, and in particular Articles 101 TFEU and 102 TFEU. The measures provided for in this Directive should not be used to restrict competition unduly in a manner contrary to the Treaty.

163 United States v. Line Material Co., 333 U.S. 287, 308 (1948).

in the context of tangible goods, the exercise of a patent right might also thus amount to an anticompetitive conduct.

1.3. The Relevant Antitrust Provisions

The next paragraphs will discuss in greater detail the circumstances in which the exercise of a legitimately obtained patent right can constitute an anticompetitive behavior. Given that the conduct of SEP owners has been addressed mainly through rules of unilateral conduct, the evaluation will primarily focus on Article 102 TFEU, Section 2 of the Sherman Act, and Section 5 of the FTCA. It might thus useful to briefly review the prohibitions embodied in the three provisions.

1.3.A. Article 102 TFEU

Article 102 TFEU prohibits a dominant undertaking, including a dominant patent owner, from abusing its dominant position. In order to prove a violation of Article 102 TFEU, the Commission needs to show that the undertaking under investigation (1) holds a dominant position, and (2) it has engaged in an abusive behavior.

Article 102 TFEU does not define the concept of abuse, but only provides a non-exhaustive list of examples.¹⁶⁴ The ECJ has nonetheless clarified that the prohibitions of Article 102 TFEU encompass both exclusionary and exploitative practices. In other words, the provision prohibits a dominant undertaking from excluding competitors by engaging in conducts “other than competition on merit”,¹⁶⁵ and it also prohibits the

¹⁶⁴ Article 102 TFEU provides

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

¹⁶⁵ See, e.g., *Hoffmann-La Roche & Co. AG v. Commission*, 85/76 ECR 00461, ¶ 91 (1979); *Case T-228/97 Irish Sugar v Commission* [1999] ECR II 2971, ¶ 5 (1999); *Case 322/81 NV Nederlandsche Banden Industrie Michelin v Commission*, ECR 03461, ¶ 54 (1983).

dominant undertaking from abusing its position by directly exploiting consumers.¹⁶⁶ The focus of the analysis is thus on the way in which the dominant patent owner *uses* its market power. As clarified by the ECJ, having a dominant position confers a special responsibility on the dominant undertaking, which has the duty to abstain from “any conduct that would impair undistorted competition on the market”.¹⁶⁷

1.3.B. Section 2 of the Sherman Act

Section 2 of the Sherman Act, considered the counterpart of Article 102 TFEU, prohibits “monopolization, attempts to monopolize, as well as conspiracy to monopolize any part of the trade or commerce between several States, or with foreign nations.” In order to prove a monopolization offence, the plaintiff needs to show that the undertaking has (1) a monopoly power in the relevant market, (2) that such power has been acquired or maintained in an anticompetitive way, and (3) with an anticompetitive intent.¹⁶⁸ There is no need to prove the undertaking’s subjective intent to monopolize the market, but it is sufficient to show that the act of monopolization was intentional and not accidental or inadvertent.¹⁶⁹

Bringing a claim for attempt to monopolize, on the other hand, requires evidence that (1) the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize, and (3) that there is a dangerous probability of success.¹⁷⁰ The prohibition of “attempted monopolization” thus addresses situations where the danger of an anticompetitive monopolization is clear and present, but it has not necessarily been accomplished. There is a lower threshold for monopoly power,

166 *See, e.g.*, Case 27/76 United Brands Company and United Brands Continentaal BV v Commission of the European Communities, [1978] ECR 207; Case 26/75 General Motors Continental v Commission [1975] ECR 1367. COMP/C-1/36.915 British Post office v. Deutsche Post AG., OJ L331/40 [2001].

167 *See, e.g.*, Case 322/81 NV Nederlandsche Banden-Industrie Michelin NV v Commission, ECR 3461, ¶ 57 (1983); Joined Cases C 395/96 P and C 396/96 P Compagnie Maritime Belge Transports & Others v. Commission, ECR I 1365, ¶ 37 (2000); Case C-280/08 Deutsche Telekom AG v European Commission, ECR I-09555, ¶ 83 (2010); Case C-52/09 Konkurrensverket v. TeliaSonera Sverige AB, ECR I-00527, ¶ 25 (2009).

168 United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

169 United States v. Aluminum Co. of America, 148 F.2d 416, 431-32 (2nd Cir. 1945). The existence of intent is often inferred from evidence of monopoly power plus exclusionary practice. (See H. HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE, 3rd ed. (West, Thomson Publ. 2005)).

170 Crossroads Cogeneration Corp. v. Orange & Rockland Utils., Inc., 159 F.3d 129, 141 (3rd Circuit 1998).

which is nonetheless counterbalanced by a stronger requirement of anticompetitive intent.¹⁷¹

Therefore, the analysis in Section 2 cases focuses on the way in which the patent owner *obtains* market power. Undertakings are allowed to compete in the market, and thus acquire market power, by producing better, cheaper and more attractive products. However, they cannot protect (or gain) their market power by engaging in anticompetitive practices that distort the competitive process.

1.3.C. Section 5 of the FTCA

U.S. antitrust law has another weapon through which it can address the patent owner's unilateral conduct: Section 5 of the FTCA. Section 5 of the FTCA prohibits undertakings to engage in "unfair or deceptive acts or practices" and "unfair methods of competition". The prohibition of unfair acts has traditionally been considered a consumer protection statute, applied mainly to address cases of misleading advertising, abusive debt collection practices, and other conduct that directly affected consumers. The prohibition of "unfair methods of competition" on the contrary addresses conduct that is typically prohibited by the antitrust statutes.¹⁷² The FTC does not have the competence to enforce the Sherman Act. Nevertheless, it can prosecute anticompetitive conducts prohibited by the Sherman Act through the application of the FTCA.¹⁷³

The Supreme Court held, nonetheless, that the prohibition Section 5 of the FTCA goes beyond the scope of the Sherman Act.¹⁷⁴ The provision captures also methods of unfair competition that do not violate the exact letter of the antitrust laws, but are

171 *See, e.g.*, *Swift and Co. v. United States*, 196 U.S. 375, 396 (1905); *Cal. Computer Products v. Int'l Business Machines*, 613 F.2d 727, 737 (9th Cir. 1979); *National Reporting Co. v. Alderson Reporting Co., Inc.*, 763 F.2d 1020, 1024 (8th Cir. 1985).

172 The FTCA is strictly speaking not part of the antitrust corpus.

173 K. A. DeMasi and Jonathan J. Clarke, *Section 5 of the FTC Act and the End of Antitrust Modesty*, BLOOMBERG LAW REPORTS (2010).

174 *F.T.C. v. Sperry & Hutchinson Co.*, 405 U.S. 233., 244 (1974) ("[T]he Federal Trade Commission does not arrogate excessive power to itself if, in measuring a practice against the elusive, but congressionally mandated standard of fairness, it, like a court of equity, considers public values beyond simply those enshrined in the letter or encompassed in the spirit of the antitrust laws"); *F.T.C. v. Motion Picture Advertising Service Co.*, 344 U. S. 392, 394 (1953) ("The 'unfair methods of competition', which are condemned by § 5 (a) of the Act, are not confined to those that were illegal at common law or that were condemned by the Sherman Act"); *F.T.C. v. Indiana Federation of Dentists*, 476 U.S. 447 , 454 (1986) ("The standard of 'unfairness' under the FTC Act is, by necessity, an elusive one, encompassing not only practices that violate the Sherman Act and the other antitrust laws, but also practices that the Commission determines are against public policy for other reasons").

nonetheless against its “spirit”. One example of a Section 5 standalone offence is the “invitation to collude.” A mere invitation to collude does not constitute a violation of either Section 1 or Section 2 of the Sherman Act. The FTC has nonetheless challenged such invitations as a standalone violation of Section 5 of the FTCA.¹⁷⁵

However, the reach of Section 5 of the FTCA remains unsettled. There are very few cases where the FTC has successfully challenged a conduct as a Section 5 standalone offence. Besides the cases concerning an “invitation to collude”, courts have been restrictive towards the FTC’s efforts to develop an independent Section 5 claim.¹⁷⁶ They have dismissed a number of cases where the FTC tried to address conduct falling outside the scope of the Sherman Act as unfair methods of competition.¹⁷⁷ As result, past cases did not identify a clear test to be applied when challenging a conduct as a Section 5 standalone violation. Therefore, even if one accepts that the reach of Section 5 goes beyond the limits of the Sherman Act, it remains unclear what conduct could constitute a standalone violation of Section 5 of the FTCA.

Courts have nonetheless delineate some limiting principles for the application of Section 5 as a standalone offence. First, they emphasized that, when challenging a conduct as a Section 5 standalone violation, the FTC needs to prove that the challenged conduct had an adverse effect of competition.¹⁷⁸ This includes restrictions of competition in their incipency—that is, acts which, when full blown, would violate

175 *Stone Container Corp.*, 125 F.T.C. 853 (1998); *Precision Moulding Co.*, 122 F.T.C. 104 (1996); *YKK (USA) Inc.*, 116 F.T.C. 628 (1993); *A.E. Clevite, Inc.*, 116 F.T.C. 389 (1993); *Quality Trailer Products Corp.*, 115 F.T.C. 944 (1992).

176 *See, e.g.*, Opening Remarks of Chairman William Kovacic, FTC Workshop, at 10 (Oct 17, 2008), available at http://www.ftc.gov/sites/default/files/documents/public_events/section-5-ftc-act-competition-statute/transcript.pdf (“it is difficult to find even ten successfully litigated Section 5 antitrust cases over the Commission’s nearly hundred-year history.”); Daniel A. Crane, *Reflections on Section 5 of the FTC Act and the FTC’s Case against Intel*, THE BERKELEY ELECTRONIC PRESS (2010) (“Courts have frequently quashed the FTC’s efforts to develop an independent Section 5, even while paying lip service to the independence principle.”).

177 *See, e.g.*, *Official Airline Guides, Inc. v. FTC*, 630 F. 2d 920 (2nd Cir. 1980); *Boise Cascade Corp. v. F.T.C.*, 637 F. 2d 573 (9th Cir. 1980).

178 *See, e.g.*, *F.T.C. v. Indiana Federation of Dentists*, 476 US 447, 456 (1986) (where the Supreme Court evaluated whether a conspiracy among dentists to refuse to submit X-rays to dental insurers harmed competition); *Sperry & Hutchinson Co. v. F.T.C.*, 432 F.2d 146, 149 (5th Cir. 1972) (maintaining that the FTC “cannot rest its case solely on the determination that injury to a competitor exists”); *Boise Cascade Corp. v. F.T.C.*, 837 F. 2d 1127 (D.C. Cir. 1988) (maintaining that the FTC needs to prove “either collusion or actual effect on competition to make out a Section 5 violation”).

the antitrust provisions.¹⁷⁹ Courts have however not clarified whether there is a need to prove actual harm to competition, or whether it is sufficient to prove that the competitive injury is suspected or embryonic.¹⁸⁰ Further, the FTC needs to prove that the undertaking's conduct is unfair.¹⁸¹ The Court of Appeals for the Second Circuit suggested that the challenged conduct should have at least some indicia of oppressiveness.¹⁸² This requires (1) some evidence of the undertaking's anticompetitive intent or purpose, or (2) the absence of an independent legitimate business reason for the undertaking's conduct.¹⁸³

Having sketched the key elements of these offences, we now analyze under which circumstances the exercise of a legitimately obtained patent right can violate any of the three provisions.

179 *F.T.C. v. Motion Picture Advertising Service Co.*, 344 US 392, 395 (1953); *F.T.C. v. Brown Shoe Co.*, 384 U.S. 316, 323 (1966); *Fashion Guild v. F.T.C.*, 312 U. S. 457, 463, 466 (1941).

180 Concurring Opinion Of Commissioner Jon Leibowitz, *Rambus, Inc.*, Docket No. 9302. (Aug 2, 2006) (“[A] showing of an actual anticompetitive effect is unnecessary to prove a violation of Section 5 because that section was designed to stop [in] their incipency acts and practices that could lead to violations of the Sherman or Clayton Acts. While conduct violating Section 5 must bear a realistic potential for causing competitive harm, more manifest injury should not be required.”).

181 *Sperry & Hutchinson Co. v FTC*, 432 F. 2d 146, 150 (5th Cir. 1970) (“[T]he Commission cannot rest its case solely on the determination that injury to a competitor exists”); *E.I. du Pont de Nemours & Co.*, 729 F.2d 128, 136-138 (2nd Cir. 1977) “. . . the practice complained of must be more than a mere restraint of competition.”).

182 The FTC held that *du Pont*, *Ethyl* and two other antiknock compound manufacturers engaged in unfair methods of competition, when each firm independently adopted business practices as: (i) the sale of the product at a delivered price which included transportation costs, (ii) the giving by *Du Pont* and *Ethyl* of extra advance notice of price increases, over and above the 30 days provided by contract, and (iii) the use by *Du Pont* and *Ethyl* (and infrequently by *PPG*) of a “most favored nation” clause under which the seller promised that no customer would be charged a higher price than other customers. The FTC found that there was no collusion between the undertakings; it nonetheless found that, by removing some of the uncertainties over price determination, and by facilitating price parallelism, the practices had the collective effect of substantially lessening competition, and thus violated Section 5 of the FTCA. The FTC took the view that “because § 5 is not confined to the strictures of the Sherman and Clayton Acts but prohibits a broader range of conduct, it can be violated even in the absence of agreement if the firms engage in interdependent conduct that, because of the market structure and conditions, facilitates price coordination in a way that substantially lessens competition in the industry”. (*E.I. du Pont de Nemours & Co. v. F.T.C.*, 729 F. 2d 128, 135 (2nd Cir. 1984).

183 *Id.* at. 139-140. (“In our view, before business conduct in an oligopolistic industry may be labelled “unfair” within the meaning of § 5 [...] at least some indicia of oppressiveness must exist [...] such as (1) evidence of anticompetitive intent or purpose on the part of the producer charged, or (2) the absence of an independent legitimate business reason for its conduct [...] In short, in the absence of proof of a violation of the antitrust laws or evidence of collusive, coercive, predatory, or exclusionary conduct, business practices are not “unfair” in violation of § 5 unless those practices either have an anticompetitive purpose or cannot be supported by an independent legitimate reason.”).

2. THE PATENT OWNER'S ANTITRUST LIABILITY

2.1. *Patent owner's market power*

In both jurisdictions, the antitrust scrutiny of a patent owner's conduct first requires the evaluation of the patent owner's market power. Under EU competition law, Article 102 TFEU addresses only the conduct of dominant undertakings. Similarly, under U.S. antitrust law, the offence of monopolization and the offence of attempted monopolization require the plaintiff to show that the patent owner has monopoly power in the relevant market, or at least evidence that there is a dangerous probability that the anticompetitive conduct would allow the patent owner to acquire or maintain such power.¹⁸⁴

EU competition law and U.S. antitrust law have adopted different definitions of dominant position and monopoly power. EU competition law defines a dominant position as a “position of economic strength which enables the undertaking to impede effective competition in a relevant market, by allowing it to behave substantially independently of competitors, customers, and consumers.”¹⁸⁵ The U.S. Supreme Court has, on the other hand, defined monopoly power as the “power to control prices or exclude competition.”¹⁸⁶ If a firm can profitably raise prices without causing competing firms to expand output and drive down prices, that firm has monopoly power in the sense of the Sherman Act.¹⁸⁷

There are some similarities in the two definitions in that both ask to what extent a dominant player may exploit its position without the market punishing it. Both jurisdictions will consider questions such as the presence of competitors and barriers to enter the market.¹⁸⁸ However, the EU definition also includes an assessment of the firm's power to harm rivals, which is not present in the U.S. test. In part this may

184 *See, e.g.*, *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966).

185 *See, e.g.*, *Case 27/76 United Brands Company and United Brands Continentaal BV v Commission of the European Communities*, ECR 207, ¶ 65 (1978); *Hoffmann-La Roche & Co. AG v Commission*, ECR 00207, at 65 (1978); *Case 322/81 NV Nederlandsche Banden-Industrie Michelin NV v Commission*, ECR 03461, ¶ 30 (1983). *Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law*, C 372 1997, P. 0005 – 0013, ¶ 3 (1997).

186 *United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1956).

187 *See, e.g.*, *Harrison Aire, Inc. v. Aerostar Int'l, Inc.*, 423 F.3d 374, 380 (3d Cir. 2005).

188 In evaluating cases of alleged attempted monopolization, US courts often relied on the same factors as the one used in evaluating whether a patent owner monopoly power, although recognizing that a lesser quantum of market power can suffice to prove an attempted monopolization. (*United States v Microsoft*, 253 F.3d 34, 81 (D.C. Cir. 2001).

explain why an undertaking may be found dominant under EU law with a lower market-share threshold than the threshold found in the United States. Generally, in the EU, dominance is presumed with a market share of 50%, while in the United States the threshold to show the existence of monopoly power is generally higher. The Third Circuit has ruled that a market share between 75 percent and 80 percent is “more than adequate to establish a *prima facie* case of market power.”¹⁸⁹ A market share between 50 and 70 percent may, on the contrary, indicate the existence of monopoly power, but the court will generally require additional factors to support the inference of monopoly power.¹⁹⁰ The quantum of 50% is generally sufficient in cases of attempted monopolization.¹⁹¹

Neither EU competition law nor U.S. antitrust law provides a presumption of market power for a patent owner. Both jurisdictions emphasize that the mere possession of a patent right does not necessarily confer significant market power.¹⁹² A patent confers a monopoly over the invention. However, it does not necessarily confer the ability to “behave independently from their competitors and consumer”, and “control prices or exclude competition”. The actual market power of the patent owner depends on several other factors, such as the interest of the market in the patented good, the existence of substitutes, whether alternative goods are protected by the patent, and their relative costs. Even after a patent has been granted, the owner might still face considerable constraints from patented and non-patented substitutes available in the market, and it might be consequently unable to exercise any significant level of market power.¹⁹³

In sum, EU competition law and U.S. antitrust law adopt different definitions and different legal standards in the evaluation of the patent owner’s market power. Both jurisdictions however reject the presumption of market power for a patent owner,

189 *United States v. Dentsply Int’l, Inc.*, 399 F.3d 181, 188 (3d Cir. 2005).

190 *See, e.g., Pepsico, Inc. v Coca-Cola Co.*, 315 F.3d 101, 109 (2d Cir. 2002).

191 *Rebel Oil Co., Inc. v. Atlantic Richfield Co.*, 51 F. 3d 1421, 1438 (9th Circuit).

192 For EU see: Joined cases C-241/91 P and C-242/91 P *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities*, ECR I-00743, at 46 (1995). For US see: *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 US 28, 46 (2006).

193 J. TEMPLE LANG, *THE APPLICATION OF THE ESSENTIAL FACILITY DOCTRINE TO INTELLECTUAL PROPERTY RIGHTS UNDER EUROPEAN COMPETITION LAW, IN ANTITRUST, PATENTS AND COPYRIGHT: EU AND US PERSPECTIVE* (François Lévêque and Howard Selanski, Edward Elgar Publ 2005).

and require that the patent owner's market position is evaluated on a case-by-case basis.

2.2. *The anticompetitive conduct*

Evidence of strong market power is not sufficient to prove an antitrust violation. Neither EU competition law nor U.S. antitrust law prohibits the mere possession of strong market power.¹⁹⁴ The existence of market power is only one of the elements of the offence. The next step in the application of the provisions on unilateral conduct requires the court or the competition authority to evaluate whether the patent owner has engaged in an anticompetitive conduct.

In evaluating whether a specific licensing practice constitutes an anticompetitive behavior, both EU competition law and U.S. antitrust law apply the principles developed in the context of tangible goods. In the United States, this position is clearly stated in the *Antitrust Guidelines for the Licensing of Intellectual Property Rights*, a non-binding document which lists the enforcement priorities of the DOJ and the FTC in addressing the patent owner's conduct.¹⁹⁵ The two agencies recognized that there are important differences that distinguish IPRs from other forms of property. They emphasize, however, that those differences do not require the application of different antitrust principles.¹⁹⁶ In the EU, none of the courts' decisions or Commission's documents provides a comparable general statement. While there are cases where the court emphasized that the application of competition law provisions to the IPR owners might require a stricter legal standard,¹⁹⁷ the analysis of the cases as a whole suggests that the approach adopted in the context of IPRs generally follows the principles adopted in the context of tangible goods.

194 For the EU see: Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings § 2009/C 45/02, ¶ 1 (2009). See also: T-201/04 Microsoft v. Commission, ECR II-03601, ¶ 229 (2007). For the US see: U.S. D.O.J. AND F.T.C., *Antitrust Guidelines for the Licensing of Intellectual Property*, § 2.2 (1995).

195 U.S. D.O.J. AND F.T.C., *Antitrust Guidelines for the Licensing of Intellectual Property*, § 2.1 (1995).

196 *Id.*

197 See, e.g., T-201/04 Microsoft v. Commission, ECR II-4463, ¶¶ 284, 334 (2004) (“[The] case might not be a mere refusal to supply a product or a service indispensable to the exercise of a specific activity but a refusal to license intellectual property rights, and thus chose the strictest legal test. The Court notes that the circumstance that the refusal prevents the appearance of a new product for which there is potential consumer demand is found only in the case-law on the exercise of an intellectual property right.”).

2.2.A. Refusal to license

A refusal to license a patent represents one of the most controversial issues in the patent-competition law relationship. A patent right confers to its owner the right to exclude others from the use of the patented technology. However, by refusing to license its technology, the patent owner might foreclose its competitors from the market and eliminate competition. The patent owner's refusal to license might thus raise anticompetitive concerns. The question that arises is whether a refusal to license can amount to an anticompetitive conduct actionable under the provisions of competition law.

Both EU competition law and U.S. antitrust law recognize that a mere refusal to license does not constitute an anticompetitive conduct.¹⁹⁸ Just like other undertakings, a patent owner is free to choose its trading parties, and antitrust law does not limit such right. The ECJ emphasized that “an obligation . . . to grant to third parties, even in return for a reasonable royalty, a license . . . would lead to the proprietor thereof being deprived of the substance of his exclusive right.”¹⁹⁹ It thus concluded that a mere refusal to license cannot constitute an abuse of a dominant position. Similarly, also the U.S. Supreme Court noted that “in the absence of any purpose to create or maintain a monopoly, the [Sherman Act] does not restrict the right of a trader or manufacturer to freely exercise his own independent discretion as to parties with whom he will deal.”²⁰⁰ Hence, even when the patent owner has monopoly power, it has no obligation to license the patented technology to other market participants.²⁰¹

The right to refuse to license is nonetheless qualified. Both jurisdictions have recognized that, in specific circumstances, a refusal to supply a patented technology might constitute an anticompetitive conduct and thus trigger an antitrust liability. Nevertheless, as it will be explained, the two jurisdictions have adopted different approach when recognizing an exception to the general rule.

198 For the EU *see, e.g.*, Case 238/87 AB Volvo v Erik Veng (UK) Ltd., ECR 06211, at 8 (1988); Case 24/67 Parke, Davis & Co. v Probell, Reese, Beintema-Interpharm and Centrafarm, ECR (English special edition) 00055, at 71 (1968); Case C-418/01 IMS Health GmbH & Co. OHG v NDC Health GmbH & Co., I-05039, at 34 (2004).; For the US *see, e.g.*, United States v. Colgate & Co., 250 U.S. 300, 307 (1919); Intergraph Corp. v Intel Corp., 195 F.3d 1346, 1358 (Fed. Cir. 1999).

199 Case 238/87 AB Volvo v Erik Veng (UK) Ltd., ECR 06211, para 8 (1988).

200 United States v. Colgate & Co. 250 U.S. 300, 307 (1919).

201 *See, e.g.*, Intergraph Corp. v Intel Corp., 195 F.3d 1346, 1362 (Fed. Cir 1999) (even where it exists “market power does not ‘impose on the intellectual property owner an obligation to license the use of that property to others.’”).

2.2.A.1. The “exceptional circumstances” test under EU competition law

In the EU, the ECJ determined that a refusal to license an IPR constitutes an abuse of a dominant position if it meets four cumulative conditions:²⁰² (1) the access to the input protected by the IPR is indispensable to compete in the market,²⁰³ (2) the refusal to license excludes effective competition in the market,²⁰⁴ (3) it prevents the emergence of new products,²⁰⁵ (4) and the refusal is not objectively justified.²⁰⁶

The ECJ adopted the exceptional circumstances test for the first time in the *Magill* case.²⁰⁷ The case concerned three broadcasting companies which refused to license its program-related information to Magill TV Guide Ltd, (Magill), a company interested in publishing a comprehensive weekly television guide. The ECJ found that the three companies used their IPRs as a tool to “to exclude any potential competition from [a secondary] market.”²⁰⁸ In this way, they prevented the development of a new product—a comprehensive weekly television guide—for which there was potential consumer demand. The ECJ maintained that the refusal to license the IPR was not justified by any specific need, and that the exercise of the IPR went “beyond what [was] necessary to fulfill the essential function of the IPRs”. The ECJ concluded that the aim of the refusal to license was clearly incompatible with competition law,²⁰⁹ and thus amounted to an abuse of a dominant position.

202 Case C-418/01 IMS Health GmbH & Co. OHG v NDC Health GmbH & Co., I-05039, at 50 (2004).

203 This included the evaluation of whether there are substitutes to the input protected by the IPR, and whether there are technical, legal or economic obstacles capable of making it impossible (or unreasonably difficult) for any undertaking to reproduce such input.

204 Case T-69/89 Radio Telefis Eireann v Commission of the European Communities, ECR II-485, at 52-56 (1995).

205 The ECJ clarified in the *Magill* case that the refusal to license can be abusive only if it prevents the offer of a new type of product that the dominant undertakings does not offer and for which there is potential consumer demand. The criteria were however arguably relaxed in the *Microsoft* case, when the ECJ maintained that such element is met also when the refusal impedes technical development. T-201/04 Microsoft v. Commission, ECR II-4463, ¶ 647 (2004).

206 The court has recognized that the IP owner might have a valid business justification for the refusal to grant a license. The Commission made clear that it will consider claims that a refusal is necessary to allow the dominant undertaking to realize an adequate return on the investments. As showed by the *Microsoft* case, however, just a general statement that the refusal is justified by the need to protect innovation might not be sufficient.

207 Joined cases C-241/91 P and C-242/91 P Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities, ECR II-00485(1991).

208 *Id.* at 73.

209 *Id.* at 75.

The ECJ refused to apply the doctrine in few cases after *Magill*.²¹⁰ It nevertheless confirmed the exceptional circumstances test in two important occasions. First, the doctrine was applied in the much criticized *IMS Health* case.²¹¹ IMS developed a format to present data on the sale of pharmaceutical products called a “brick” structure, which became a *de facto* industry standard. Given that customers refused to adopt alternatives, IMS’ competitors tried to obtain the right to use the copyrighted brick structure from IMS. However, IMS refused to grant a license and its competitors filed a complaint with the European Commission maintaining that IMS’ refusal to license constituted an abuse of a dominant position.²¹² The Commission imposed an interim measure (later withdrawn) on IMS, forcing the undertaking to license its brick structure. The Commission maintained that IMS’ brick structure had become the national standard, and that consumers were locked in its use. It added that the brick structure was indispensable to carry on business, given that there was no actual or potential substitute. The Commission reasoned that IMS’ refusal to license was not objectively justified, and it was likely to foreclose the market to potential new entrants and eliminate all prospect of competition. It thus concluded that IMS’ refusal to license constitutes a *prima facie* abuse of a dominant position.²¹³

A parallel patent infringement case was discussed in Germany, where the Frankfurt court made a reference for a preliminary ruling to the ECJ. Also the ECJ confirmed that the IMS’ refusal to license might constitute an abuse of a dominant position.²¹⁴ The ECJ did however not determine whether given the circumstances of the case, the IMS’ refusal amounted to an abuse, but left the ultimate decision to the national court. Several commentators criticized the ECJ’s ruling. They pointed out that it did not provide any reference to the national court with respect to the elements that need to be taken in evaluating the presence of a “new product” element.²¹⁵ In

210 *See, e.g.*, Case C-7/97, Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co. KG, ECR I-07791 (1998).

211 Case C-418/01 IMS Health GmbH & Co. OHG v NDC Health GmbH & Co., I-05039 (2004).

212 Press Release, Commission Starts Procedure Against IMS Health in Germany, seeks interim measures (Mar. 14, 2001), *available at* http://europa.eu/rapid/press-release_IP-01-365_en.htm?locale=en

213 Press Release, Commission Imposes Interim Measures on IMS Health in Germany, IP/01/941 (Jul 3, 2001).

214 Case C-418/01 IMS Health GmbH & Co. OHG v NDC Health GmbH & Co., I-05039, 48 (2004).

215 J. Killick (White & Case), *IMS and Microsoft Judged in the Cold Light of IMS* (Dec 4, 2001), at 4, *available at* <http://www.whitecase.com/files/Publication/52195d09-658c-45e7-a0d9->

particular, they emphasized that there was no secondary market for the *IMS* product, and that such market was merely hypothetical. Those commentators stressed that imposing a duty to license in such circumstances is not justified and it would have a negative impact of the incentives to invest in innovation.²¹⁶

Next, the Commission considered a refusal to license abusive in the *Microsoft* case, where Microsoft refused to license certain interface information of its working group server operating systems to its competitors.²¹⁷ In reviewing the case, the Court of First Instance (CFI) arguably relaxed even further the “new product” element of the exceptional circumstances test. It maintained that a refusal to license might constitute an abuse of a dominant position not only if it prevents the development of a new product, but also if it gives rise to a “limitation . . . of technical development”.²¹⁸ Also in this case, many scholars criticized this test as being too loose and elusive, and departing from the *Magill* judgment.²¹⁹

Although controversial, the three cases confirm that a refusal to license an IPR might in exceptional circumstances constitute an abuse of a dominant position. The cases imposing such duty relied very much on the doctrine developed earlier in *Commercial Solvents*, which, in the view of several authors, introduced the “essentially facilities doctrine” in EU competition law (although the ECJ did not use

6b9d480e2fbc/Presentation/PublicationAttachment/d49ad7c5-3a2a-4324-aa65-74df0ecc39fc/00688ny_killick_article_byline_02.pdf.

216 Drexl maintains that the underlying idea of the intervention in the *Magill* case was that IPRs should protect their owners from competition by imitation, but not from competition by substitution. (J. Drexl, *Abuse of Dominance in Licensing and Refusal to License: A "More Economic Approach" to Competition by Imitation and to Competition by Substitution* (European University Institute, Robert Schuman Center for Advanced Studies 2005)). The requirement of the secondary market had thus the purpose to distinguish between competition by imitation and competition by substitution. As noted by Gitter, undertakings would “decline to enter a particular market if they had to share their essential facility with rivals competing in exactly the same market. [T]he very essence of that right is the ability to exclude others from using it, and the inability to do so will destroy incentives to invest in the creation of intellectual property”. (D. M. Gitter, *Strong Medicine For Competition Ills: The Judgment Of The European Court Of Justice In The IMS Health Action And Its Implications For Microsoft Corporation* 15 DUKE JOURNAL OF COMPARATIVE & INTERNATIONAL LAW 152 (2004)). As pointed out by several authors, however, the *IMS Health* case did not concern competition by substitution, but rather competition by imitation. Competitors tried to offer substitutes, but, without success. The secondary market was mainly hypothetical.

217 T-201/04 Microsoft v. Commission, ECR II-4463, (2004). In its appeal, Microsoft contended that the elements determined in *Magill* and *IMS Health* were not met. The ECJ did not however agree, finding that the copyrighted information was indispensable, there was a risk that the refusal would eliminate competition, and it would prevent the emergence of a new good.

218 *Id.* at 647.

219 *Id.* at. 561 – 563.

this wording).²²⁰ Under this doctrine, competition law can force a dominant undertaking to grant access to an essential input on reasonable and nondiscriminatory terms, if such access is needed to provide service in a secondary market. The discussed cases suggest that the Commission intends to apply the principles of the essential facilities doctrine also to the context of IPRs. When the access to the IPR is essential, a refusal to license might constitute an abuse of a dominant position.

It is worth noting that none of the discussed cases concerned a refusal to license a patent, but only other forms of IPRs. One could consequently question whether the reasoning adopted in the *Magill* and *IMS* cases can be directly transposed to cases concerning a refusal to license a patent right.²²¹ In the United Kingdom, for instance, the Patent Court held that “it does not follow inevitably that *Magill* can be applied by analogy to a patent case.”²²² The court noted that different IPRs last for different periods, they are infringed by different types of activity, and they are subject to different types of defenses or exceptions. For example, in contrast to other IPRs, patents provide the compulsory license exception. One could consequently argue that the exceptional circumstances doctrines should not be applied to cases concerning patent rights.

The absence of precedents clearly leaves some uncertainty with respect to the company’s liability for refusing to license a patent. Nevertheless, it seems unlikely that the ECJ and the Commission would adopt a different approach in evaluating a refusal to license a patent than in cases concerning a refusal to license other IPRs. Neither the ECJ nor the Commission have differentiated between different IPRs when discussing cases of a refusal to license.²²³ Further, in *Parke, Davis & Co v. Probel*, the

220 J. Drex, *Intellectual Property and Antitrust Law IMS Health and Trinko - Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases*, 35(7) INTERNATIONAL REVIEW OF INTELLECTUAL PROPERTY AND COMPETITION LAW 788 (2004). J. Turney, *Defining the Limits of the EU Essential Facilities Doctrine on Intellectual Property Rights: The Primacy of Securing Optimal Innovation*, 3 NORTHWESTERN JOURNAL OF TECHNOLOGY AND INTELLECTUAL PROPERTY 179 (2005).

221 LIONEL BENTLY AND BRAND SHERMAN, INTELLECTUAL PROPERTY LAW, 2nd ed. (Oxford University Press 2004).

222 Philips Electronics N.V. v Ingman Limited and the Video Duplicating Company Limited, F.S.R. 112, 134 – 135 (Patents Court).

223 See, e.g., The ECJ has implicitly recognized such approach, by stating that “the central issue to be resolved [...] is whether [...] the conditions on which an undertaking in a dominant position may be required to grant a licence are satisfied”, and not further discussing the difference between copyrights and patents. (T-201/04 Microsoft v. Commission, ECR II-4463, ¶ 290 (2004). See also: Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conducts by Dominant Undertakings, C 45/7, ¶ 80 (2009).

ECJ explicitly acknowledged that patent rights are not immune from competition law and their use might degenerate into a violation of Article 102 TFEU.²²⁴ Similarly, the Commission has implicitly also recognized that competition law does not differentiate among different IPRs. In *Microsoft*, for instance, it acknowledged that Microsoft's interoperability information could be covered by a patent or by a copyright. It nonetheless maintained that there was no need to decide that issue since, in any event, the conditions for finding an abuse of a dominant position were satisfied irrespective of whether the information was protected by a patent or a copyright.²²⁵ The position expressed by the ECJ and the Commission thus suggested that the exceptional circumstances doctrine applies also to a refusal to license a patent right.

Other arguments support the conclusion that a refusal to license a patent right should not be treated differently from a refusal to license other IPRs. It is true that the patent system provides the remedy of compulsory licensing. It is however important to notice that the argument for granting a compulsory license under patent law is often based on the idea of morality, public health, such as for instance, where there is a need to ensure a access to a drug for life-threatening diseases.²²⁶ The purpose of the remedy therefore is different from an antitrust intervention, which aims at stopping an anticompetitive practice. The existence of a remedy of a compulsory license under the patent system does not seem to justify a less interventionist approach under competition law. Also the argument that a compulsory license has to be imposed only in cases of weak IPRs does not seem persuasive.²²⁷ Some commentators have argued that a refusal to license has been found anticompetitive only in cases of weak IPRs. Although such argument might apply in *Magill* (where, as pointed out by some authors, the copyright could be considered weak), it seems less well founded in cases like *IMS* and *Microsoft* where the grant of copyright was not controversial, but the Commission and the ECJ nonetheless found

224 Case 24-67 Parke, Davis and Co. v Probel, Reese, Beintema-Interpharm and Centrafarm, ECR 000555, ¶ 72 (1968).

225 T-201/04 Microsoft v. Commission, ECR II-4463, ¶¶ 288-289 (2004).

226 WORD INTELLECTUAL PROPERTY ORGANIZATION, SURVEY ON COMPULSORY LICENSES GRANTED BY WIPO MEMBER STATES TO ADDRESS ANTI-COMPETITIVE USES OF INTELLECTUAL PROPERTY RIGHTS (Oct. 4, 2011), *available* at http://www.wipo.int/edocs/mdocs/mdocs/en/cdip_4/cdip_4_4_rev_study_inf_5.pdf. See also S. M. Ford, *Compulsory Licensing Provisions Under the TRIPS Agreement: Balancing Pills And Patents*, 15 AMERICAN UNIVERSITY INTERNATIONAL LAW REVIEW (2000).

227 W. CORNISH & D. LLEWELLYN, INTELLECTUAL PROPERTY: PATENTS, COPYRIGHT, TRADE MARKS AND ALLIED RIGHTS, 6th ed., at 755 (Sweet & Maxwell 2003).

the imposition of a duty to license appropriate.²²⁸ It is therefore possible to conclude that, when the elements of the exceptional circumstances test are met, a refusal to license a patent right can constitute an abuse of a dominant position in violation of Article 102 TFEU.

2.2.A.2. Limited liability under U.S. antitrust law

U.S. courts have been much more reluctant to find a refusal to license anticompetitive than their EU counterparts. There are cases in which U.S. courts considered a refusal to license in violation of Section 2 of the Sherman Act. The Ninth Circuit, for example, considered anticompetitive Kodak's refusal to license replacement parts for its photocopiers and micrographic (or microfilm) equipment to independent service organizations (ISOs), which competed with Kodak in the market for replacement parts.²²⁹ Replacement parts were protected by both patents and copyrights. The court ruled that the right to refuse to grant a license had a presumably valid business justification, which was nevertheless rebuttable. The Ninth Circuit found that Kodak's justification concerning the IPRs protection was just a pretext and did not provide a valid business justification for a refusal to license.²³⁰

Several commentators criticized the approach adopted by the Ninth Circuit, maintaining that it gave too much weight to the IPR owner's subjective intent, a criterion that is not only often difficult to evaluate, but also not in line with the antitrust trend of relying on effects-based approaches.²³¹ The criticism was reflected in the Federal Circuit's judgment in *Independent Service Organizations Antitrust Litigation v Xerox* (hereinafter *Xerox*).²³² The case concerned very similar circumstances as the one presented in the *Kodak* case.²³³ The Federal Circuit nonetheless refused to apply the *Kodak* approach, emphasizing that "antitrust laws do

228 M. Delrahim, *Forcing Firms to Share the Sandbox: Compulsory Licensing Of Intellectual Property Rights And Antitrust*, British Institute of International and Comparative Law (May 10, 2004), available at <http://www.justice.gov/atr/public/speeches/203627.pdf>.

229 *Image Technical Services v. Eastman Kodak Co.*, 125 F.3d 1195, 1212-1213 (9th Cir. 1997).

230 *Id.* at 1219.

231 *See, e.g.*, HERBERT HOVENKAMP; PHILLIP AREEDA, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION*, Vol. III, at 222 (Aspen Publ. 2002).

232 *In re Independent Service Organizations Antitrust Litigation v Xerox Corp.*, 203 F. 3d 1322 (Fed. Cir. 2000).

233 Xerox manufactured, sold, and serviced high-volume copiers. In 1984, it established a policy of not selling parts unique to its series 10 copiers to independent service organizations ("ISOs"), unless they were also end-users of the copiers. ISOs brought suit claiming that copier manufacturer's refusal to sell its patented parts and copyrighted manuals and to license copyrighted software violated antitrust laws.

not negate the patentee's right to exclude others from patent property."²³⁴ The Federal Circuit recognized that the right to exclude is not absolute, and that it might in certain circumstances constitute an anticompetitive conduct, particularly when it concerns illegal tying, fraud against the Patent and Trademark Office, or sham litigation.²³⁵ The Federal Circuit nonetheless noted that it is for the defendant to prove that one of these exceptions applies in the concrete case. In the absence of such allegation, the court refused to evaluate the patent owner's subjective motivation for a refusal to license.²³⁶ It explained that by establishing the system of IPRs, Congress relied on the assumption that

[the right to] exclude others from using their works creates a system of incentives that promotes consumer welfare in the long term by encouraging investment in the creation of [such work]. We cannot require antitrust defendants to prove and reprove the merits of this legislative assumption in every case where a refusal to license . . . comes under attack.²³⁷

The Federal Circuit thus adopted a presumption of legality for cases concerning a refusal to license.

The divergent decisions adopted by the two courts leave some uncertainty regarding antitrust liability for a refusal to license a patent. It seems, however, that particularly after the U.S. Supreme Court decision in the *Trinko* case, a unilateral and unconditional refusal to license is unlikely to constitute an act of monopolization under the Sherman Act. The *Trinko* case did not concern a refusal to license. Rather, the court evaluated Verizon's failure to provide to its competitor access to the operations support systems on just, reasonable and non-discriminatory terms, as provided in the Telecommunication Act.²³⁸ The plaintiffs alleged that Verizon's refusal to provide its services aimed to limit entry in the market.²³⁹ The Supreme Court refused to find the conduct anticompetitive, maintaining that antitrust law does not

²³⁴ *Id.* at 1325.

²³⁵ *Id.* at 1327.

²³⁶ *Id.* at 1326.

²³⁷ *Id.* at 1329.

²³⁸ *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

²³⁹ *Id.* at 407.

impose on an undertaking a duty to deal with its competitors. The Supreme Court reasoned that firms may acquire a strong market position by developing a unique infrastructure. “Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive . . . to invest in [the development of those] facilities.”²⁴⁰ By forcing to the Court to grant access to the facility, antitrust law would force the undertaking to share the fruits of its investments with its competitors. This might in turn decrease the violator’s incentives to invest in research and innovation in the first place. The Supreme Court thus concluded that antitrust law “does not restrict the long recognized right [of an undertaking] . . . to exercise his own independent discretion as to parties with whom he will deal.”²⁴¹

The Supreme Court also noted that the judgment would not have been different even if the parties had pleaded the essential facilities doctrine.²⁴² The Supreme Court distanced itself from the doctrine, by emphasizing that it has “never recognized such doctrine.”²⁴³ As a result, several commentators see the *Trinko* judgment as the ultimate rejection of the “essential facility doctrine” under U.S. antitrust law.²⁴⁴ The *Trinko* case thus established a strong presumption of legality for cases concerning a refusal to deal.

The application of the principles developed in the *Trinko* case to the context of patent rights suggest that a unilateral and unconditional refusal to license a patent is presumed to be a legitimate business practice, and it is unlikely to trigger antitrust liability under U.S. antitrust law. This position was confirmed also by the two U.S. antitrust agencies—the DOJ and the FTC—which maintained that the “antitrust liability for the unilateral, unconditional refusals to license patents will not play a

²⁴⁰ *Id.* at 408.

²⁴¹ *Id.*

²⁴² *Id.* at 411. In order to sustain a claim under the essential facility doctrine, the plaintiff must prove that: (1) the monopolist controls an essential facility, (2) the inability to duplicate the facility, (3) the denial of the use of the facility to a competitors, and (4) the feasibility of providing the facility. When these elements are met, the monopolist will be forced to grant access to its facility, unless there is valid business justification for a refusal. (*See, e.g., MCI Comm’ Corp. v AT&T*, 708 F.2d 1081, 1132-1133 (7th Cir. 1983); *Aldridge v Microsoft Corp*, 995 F. Supp. 728, 752 (S.D. Tex 1998).

²⁴³ *Id.*

²⁴⁴ *See, e.g. H. J. Hovenkamp, Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87, 101 (2007) (suggesting that the *Trinko* case “leaves few opportunities for use the essential facility doctrine).

meaningful part in the interface between patent rights and antitrust protections.²⁴⁵ Under U.S. antitrust law, there is hence a strong presumption that a refusal to license a patent does not constitute an anticompetitive conduct, even if the patent owner has strong market power.

It is worth noting, that the *Trinko* ruling departs, to a certain extent, from the Supreme Court's earlier decision in the *Aspen Skiing* case, which determined that a termination of a voluntary business relationship with a competitor *may* constitute an anticompetitive conduct actionable under Section 2 of the Sherman Act. When reasoning the departure from *Aspen Skiing* ruling, the Supreme Court first noted that "Aspen Skiing is at or near the outer boundary of Section 2 liability,"²⁴⁶ emphasizing in this way the need for a narrow reading of that judgment. Next, the Supreme Court recalled that *Aspen Skiing* concerned the termination of a voluntary collaboration with competitors. In the Supreme Court's view, the termination of the relationship clearly indicated the willingness to forsake short-term profit to achieve an anticompetitive end. The Supreme court concluded that the *Trinko* case did not fit in the "limited exceptions" recognized in *Aspen Skiing*; given that Verizon would not have enter in a business relationship with its competitors, unless such obligation was provided in a statute.²⁴⁷ Nonetheless, *Aspen Skiing* suggests that despite the strong presumption of legality, a refusal to license a patent could still trigger an antitrust liability if it falls within the exception recognized in *that case*.

There might be several other qualifications to the general rule that a refusal to license does not constitute an anticompetitive conduct. Although a unilateral and unconditional refusal to license is not likely to be anticompetitive, an antitrust liability might arise in cases of a *conditional* refusal to license, in a form of tying, exclusive dealing, or reciprocity.²⁴⁸ In such cases, the legal evaluation will focus on the imposed conditions, rather than on the refusal itself.

Section 5 of the FTCA has not played a relevant role in challenging the patent owner's refusal to license. In fact, courts have been reluctant to extend the domain of

245 U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 32 (Apr. 2007).

246 Verizon Comm'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 409 (2004).

247 *Id.* at 409.

248 P. AREEDA & H. HOVENKAMP, ANTITRUST LAW ¶ 709c, at 232-34, 2nd ed. (2002) (identifying price fixing, market division, exclusive dealing, and reciprocity as categories of suspect conditional refusals).

Section 5 of the FTCA beyond the limits of the Sherman Act in a context where there is a well-developed court practice determining the elements of an antitrust violation.²⁴⁹ It would be consequently difficult to argue that a refusal to license that falls outside the Sherman Act liability could constitute a standalone violation of the FTCA. In other words, the scope of Section 5 of the FTCA in the context of a refusal to license seems to correspond with the scope of Section 2 of the Sherman Act.

2.2.B. Excessive royalties

The EU and U.S. approaches differ considerably when addressing the patent owner's imposition of excessive royalties.²⁵⁰ In the EU, the imposition of excessive prices, including excessive royalties, can constitute an anticompetitive conduct. Article 102 TFEU explicitly prohibits dominant firms from imposing "unfair purchase or selling prices or other unfair trading conditions." The ECJ clarified that the word "unfair" also encompasses excessive prices.²⁵¹ It explicitly stated (although referring to copyrights) that an IPR does not guarantee the owner the opportunity to demand the highest possible remuneration, but only the appropriate remuneration.²⁵² The case law has thus clearly determined that the patent holder's imposition of excessive royalties can constitute an abuse of a dominant position in violation of Article 102 TFEU.

Excessive prices are, on the contrary, not an antitrust offence under U.S. antitrust law. U.S. antitrust law is only concerned with the illegitimate obtainment or maintenance of monopoly power, but it does not determine how a legitimate monopolist should use its market power.²⁵³ The Supreme Court clarified that

²⁴⁹ *Boise Cascade Cor. v F.T.C.*, 637 F.2d 573, 582 (9th Cir. 1980).

²⁵⁰ Excessive prices are generally defined as prices that are set significantly above competitive levels. (See OECD, Glossary of Statistical Terms, *available at* <http://stats.oecd.org/glossary/detail.asp?ID=3211> (last visited on July 2012)).

²⁵¹ *See, e.g.* Case 27/76 *United Brands v Commission* [1978] ECR 207, at 235; Case 110/99 *Lucazeau v SACEM* [1989] ECR 2811, at 33.

²⁵² Joined cases C-403/08 and C-429/08 *Ltd and Others v QC Leisure and Others and Karen Murphy v Media Protection Services Ltd*, Football Association Premier League ECR 0000, at 108 (2011).

²⁵³ *See, e.g.* *Brulotte v. Thys Co.*, 379 U.S. 29, 33 (1964); *Carter-Wallace, Inc. v. United States*, 449 F.2d 1374, 1383 (Court of Claims 1971); *Berkey Photo, Inc. v Eastman Kodak Co.*, 603 F.2d 263, 297 (2d Cir. 1979); *Blue Cross and Blue Shield United of Wisconsin v. Marshfield Clinic*, 65 F.3d 1406, 1413 (7th Cir. 1995); *U.S. v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945); *Ball Memorial Hospital, Inc. v. Mutual Hospital Ins., Inc.*, 784 F.2d at 1325, 1339 (7th Cir. 1986).

[c]harging of monopoly prices, is not only not unlawful, but it is an important element of the free-market system. The opportunity to charge monopoly prices, at least for a short period of time, is what attracts business acumen in the first place; it induces risk taking that produces innovation and economic growth[.]²⁵⁴

A successful competitor “having been urged to compete, must not be turned upon when he wins.”²⁵⁵ The patent owner’s imposition of excessive royalties is thus not considered an anticompetitive behavior under Section 2 of the Sherman Act.

Likewise, the imposition of excessive royalties is also unlikely to constitute a standalone offence of Section 5 of the FTCA. Given the strong reluctance to condemn excessive prices under the Sherman Act, the FTC did generally not challenge the unilateral imposition of excessive royalties as unfair methods of competition. As in the case of a refusal to license, in the case of excessive royalties as well, the limits that Section 5 of the FTCA poses on the patent owner’s conduct seem to correspond to the ones determined by the Sherman Act.

The different approaches EU competition law and U.S. antitrust law adopt toward exploitative conducts (and excessive royalties, more specifically) reflect the divergence between the underlining ideologies on which the two competition laws systems rely. U.S. antitrust law is based on the strong assumption that the free market leads to the best allocation of economic resources. It also believes that the government and courts should not become itself an obstacle to the free market. At the same time, there is a strong skepticism towards the efficiency of antitrust intervention in cases of excessive prices, given the practical difficulty in identifying the violation and defining the appropriate remedy.²⁵⁶

The EU approach, on the contrary, has a stronger emphasis on distributive justice.²⁵⁷ The concept reflects the influence of the Ordoliberal school of law, which regarded excessive prices as an inequitable distribution of the benefits of the

²⁵⁴ Verizon Comm’ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004).

²⁵⁵ United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945).

²⁵⁶ M. S. Gal, *Monopoly Pricing as an Antitrust Offense in the U.S. and the EC: Two Systems of Belief About Monopoly?*, 49 ANTITRUST BULLETIN (2004).

²⁵⁷ *Id.*

market.²⁵⁸ At the same time, the prohibition of excessive prices must also be evaluated in light of the basic principles on which the European Union was established. The Treaty establishing the European Economic Community²⁵⁹, which set out the basic principles of EU competition law, did not aim at economic efficiency itself, but had a broader political goal: the establishment of a common market among the member states.²⁶⁰ As explained by Bellamy, “the basic idea behind articles 85 and 86 [now Article 101 and 102] was that if you are to dismantle barriers between states within a common market . . . you cannot risk having those barriers re-erected by private agreements or abuses of monopoly by private [parties]”.²⁶¹ The prohibition of excessive prices aimed at addressing potential barriers to the development of an internal EU market that could be raised by private parties.

Nevertheless, the difference between the approach EU competition law and U.S. antitrust law adopt toward exploitative abuses is less prominent in practice. Despite the legal basis for an antitrust intervention, the European Commission has in fact rarely condemned dominant undertakings for imposing excessive prices.²⁶² The intervention has been often seen as unnecessary, given the ability of the market to self-correct.²⁶³ High prices should attract new entrants in the market, and consequently drive prices down to competitive levels.

258 The Ordoliberal school of thought, often referred also as the Friedburg school, was founded in the 1930s at the University of Freiburg in Germany. The school promoted economic freedom and competition as the sources of prosperity, but also of political freedom. They saw competition as a central element to economic progress but placed it in a wider, socio-political perspective. The central belief was that an economy based on the free market would provide the basis for the society they envisioned. They however emphasized that competition should be protected from two main sources where power can be accumulated: governmental power and private power. In relation to the former, they argued for representative democracy. In relation to the latter, ordoliberals focused on competition law, which protected the conditions of competition, rather than focus on competition's direct results. It required dominant firms to act in a manner consistent with a competitive economic model, and stressed the role of fairness, which protected the individual's economic freedom of action. In this respect, they supported a strong role of competition law as the guarantor of free competition. (For discussion see L Lovdahl Gormsen, *Article 82 EC: Where are we coming from and where are we going to?*, 2 THE COMPETITION LAW REVIEW 5(2006)).

259 Also known as the Rome Treaty.

260 Honorable C. Bellamy, *Some Reflections on Competition Law in the Global Market*, 34 NEW ENGLAND LAW REVIEW 15 (2000).

261 *Id.*

262 To the contrary, national competition authorities of the member states of the EU have been much more aggressive in addressing cases of excessive prices.

263 V. KORAH, *EC COMPETITION LAW AND PRACTICE*, 6th ed., at 113 (Hart Publishing 1997); G. MONTI, *EC COMPETITION LAW*, chapter 7 (Cambridge University Press 2007).

The intervention towards excessive prices has been often also considered controversial. One reason is the absence of a clear test that would allow the competition authority to differentiate between high, but legitimate prices, and those that are excessive and thus abusive. The ECJ defined excessive prices as prices which have “no reasonable relation to the economic value of the products supplied.”²⁶⁴ “Reasonable” and “economic value” are however vague terms that provide little guidance for a practical evaluation.²⁶⁵ The identification of an excessive royalty might be particularly difficult in the context of IPRs where, what might be considered a monopoly profit in other sectors only represents a fair compensation for an innovative technology.²⁶⁶ The absence of a well-defined test to identify excessive royalties might open the door for costly erroneous decisions. When a company is illegitimately forced to decrease its prices, the intervention will not only affect its ability to recoup the past investments, but will also affect its willingness to further invest in innovation. Erroneous decisions might thus harm innovation and consumer welfare.

Given the controversies related to the intervention in cases of excessive prices, it should come as no surprise that in the EU as well the antitrust enforcement has rarely focused on exploitative abuses. The Commission expressed its concerns with the intervention in cases of excessive royalties already in the *1994 Report on Competition* policy, when it stated that

[c]onsumers can suffer from a dominant company exploiting this position . . . through prices higher than would be found in the market subject to effective competition. However, the Commission in its decision-making practice does not

264 See, e.g., Case 27/76 United Brands Company and United Brands Continentaal BV v Commission of the European Communities, ECR 207, ¶ 250 (1978); Hoffmann-La Roche & Co. AG v Commission, ECR 00207, ¶ 250-252 (1978).

265 In the context of tangible goods, the ECJ adopted a two-step approach which was designed to facilitate such evaluation. It determined that it is (i) first, necessary to analyze whether the difference between the costs and the charged price is excessive; and (ii) second, determine whether the price is either unfair in itself or when compared to competing products. The European Commission has however recognized that the test has a limited applicability in the context of IPRs. (EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 289 (2010)) Geradin however criticized the application of the two step-approach emphasizing several drawbacks (D. Geradin, *Pricing Abuses by Essential Patent Holders in a Standard-Setting Context: a View from Europe*, 76 ANTITRUST LAW JOURNAL 329 (2009)).

266 M. GLADER, INNOVATION MARKETS AND COMPETITION ANALYSIS: EU COMPETITION LAW AND US ANTITRUST LAW (New Horizons in Competition Law and Economics) (Edward Elgar Publishing 2006).

normally control or condemn the high level of prices as such. Rather it examines the behavior of the dominant company designed to preserve dominance, usually directed against competitors or new entrants who would normally bring about effective competition and the price level associated with it.²⁶⁷

As a result, as in the United States, also in the EU, companies have been rarely condemned for the imposition of exploitative licensing conditions.

The few cases in which the Commission challenged the imposition of excessive prices concerned situations where the market was not be able self-correct the excessive level of price, because of the presence of significant barriers to entry. This was, for example, the case of natural or legal monopolies, such as ports and postal services.²⁶⁸ A similar approach was adopted in the context of IPRs. The Commission condemned the pricing strategy of the French performing rights society SACEM in licensing French discotheques.²⁶⁹ The Commission maintained customers had no possibility to switch to an alternative licensor, in response to the exploitative licensing conditions, given that SACEM had a legally granted monopoly. The Commission confirmed its intention to intervene similar cases in the *Guidance on its enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (Guidance on exclusionary practices).²⁷⁰ The document states that “the Commission may decide to intervene in relation to [excessive prices], in particular where the protection of consumers and the proper functioning of the internal market cannot otherwise be adequately ensured.”²⁷¹ Therefore, although Article 102 TFEU provides the legal basis for an intervention, there are only a few cases where the imposition of an excessive royalty was considered anticompetitive, mainly related to markets with strong barrier to enter.

The antitrust analysis follows a different path in cases where the imposition of excessive royalties has an exclusionary effect. It is possible that a patent owner is not

267 XXIV Report on Competition Policy, at 207 (1994).

268 *See, e.g.*, Case 26/75 General Motors Continental v Commission [1975] ECR 1367; COMP/C-1/36.915 British Post Office v. Deutsche Post AG., OJ L331/40 [2001].

269 Case 110/99 Lucazeau v SACEM [1989] ECR 2811.

270 Guidance on its Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, OJ C 45, p. 7–20 (2009).

271 *Id.* at 7.

interested in licensing its technology, and makes a fictitious offer to the licensee, by imposing licensing conditions that will be ultimately rejected. The literature often refers to such practices as a “constructive refusal to license”.²⁷² In such circumstances, an antitrust liability could arise under both EU competition law and U.S. antitrust law. However, the focus of the analysis will not be on the excessive price itself, but rather on the exclusionary effects it imposes on the market. The patent owner’s conduct is thus evaluated in light of other doctrines, such as the refusal to license, or the conditional refusal to license.²⁷³

2.2.C. Conditional licensing

Courts and competition authorities confirmed that the imposition of grant-back clauses,²⁷⁴ non-assertion clauses,²⁷⁵ royalty free clauses, or other forms of conditional licensing might also trigger anticompetitive concerns. Competition law does not prohibit such practices. Rather, it recognizes that these types of licensing constraints often have a genuine purpose and serve procompetitive effects.²⁷⁶ A grant-back, for example, can facilitate licensing, given that it provides an efficient way to value the licensed IPR, and it can represent an alternative to higher royalty rates. A non-assertion clause permits the parties to avoid costly litigation over the use of an IPR, and thus allow them to focus on their core business, rather than on patent enforcement. There might be nonetheless situations where the imposition of specific licensing conditions have anticompetitive effects.²⁷⁷ A broad grant-back clause might

272 J. Drexler, *Refusal to Deal: Answers to the Questionnaire of the ICN Unilateral Conduct Working Group*, available at <http://www.internationalcompetitionnetwork.org/uploads/questionnaires/uc%20refusals/drexler.pdf>. See also: M. Tapking, *Refusal to Supply Customers under Article 82 EC* *Memorie MBL* (2008), available at: http://www.unige.ch/droit/mbi/upload/pdf/MEMOIRE_Marjolein_Tapking.pdf (“A refusal to deal may also take the form of a “constructive” refusal to deal which is characterized “by the dominant firm’s offering to supply its rival on unreasonable terms (e.g., extremely high prices, degraded service, or reduced technical interoperability.)”).

273 See in this chapter: [2.2.A. Refusal to license](#).

274 A grant-back is “an arrangement under which a licensee agrees to extend to the licensor of intellectual property the right to use the licensee’s improvements to the licensed technology.” (U.S. D.O.J. & F.T.C., *ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION* 91 (Apr. 2007)).

275 Non-assertion clauses determine that the contractual party will not assert patents or other IPRs against the other contracting party, even if that party were to engage in an infringing use. The clauses might cover existing or future patents, or both (*id.* at. 88).

276 See, e.g. U.S. D.O.J. AND F.T.C., *Antitrust Guidelines for the Licensing of Intellectual Property Rights*, §3.4 (Apr 1995).

277 For the EU see: T-201/04 Microsoft v. Commission, ECR II-4463, 1192 (2004).

deter innovation, if it completely prevents the licensee from receiving the benefits from its innovative improvements. A non-assertion clause that is too broad in its scope and duration might help maintain an illegitimate duopoly or monopoly. Further, invalid patents impair competition, and challenging their validity is generally desirable.²⁷⁸

There are cases where the imposition of specific licensing conditions has been considered an abuse of a dominant position. In *Tetra Pak*, for example, the Commission found that the undertaking abused its dominant position by imposing, *inter alia*, compulsory grant-back clauses on its customers. The Commission considered that given the strong position Tetra Pak had in the market, the imposition of such requirement, together with other contractual clauses, was part of an overall strategy to make customers totally dependent on Tetra Pak for the entire life of the machine, excluding any possibility for competition.²⁷⁹

Similarly, U.S. courts confirmed that the legality of the imposed licensing conditions should be evaluated under the rule of reason. The analysis focuses on whether the contractual restraints are likely to diminish competition in the concerned market.²⁸⁰ The analysis normally focuses on the following factors: the market power of the parties, whether the practice inhibits entry of other firms, and whether the practice reduces the incentive to innovate. Courts will normally assess whether the restraint is likely to diminish competition “among entities that would have been actual or likely potential competitors” in the absence of that restraint.²⁸¹

In sum, both jurisdictions emphasize the need to evaluate the imposed licensing conditions on a case-by-case basis. They both recognize that conditional licensing is generally legitimate, but that, in some circumstances, the imposition of specific licensing conditions might constitute an anticompetitive behavior.

278 U.S. D.O.J. AND F.T.C, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 90 (Apr. 2007).

279 Case T-83/91 *Tetra Pak International SA v Commission of the European Communities*, ECR II-00755, at 132 & 135 (1994).

280 *See, e.g.* U.S. D.O.J. AND F.T.C., *Antitrust Guidelines for the Licensing of Intellectual Property Rights*, §3.4 (Apr 1995).

281 *Id.* at. 3.1.

3. A COMPARATIVE EVALUATION

The chapter has provided a basic picture of the limits competition laws poses on the exercise of patent rights. The analysis shows that although the exercise of patent rights does not necessarily give rise to competition concerns, there are situations where conflicts do arise. In such circumstances, both EU competition law and US antitrust law recognize that patent owners are in no way immune from competition law, and competition law might limit the exercise of a legitimately obtained patent right.

The approach adopted by courts and competition authorities towards patent rights reflects the approach adopted in the context of tangible goods. As in the context of tangible goods, EU competition law and US antitrust law differ importantly in their relation towards exploitative practices, such as the imposition of excessive royalties. Whereas Section 2 of the Sherman Act does not condemn the imposition of excessive royalties, the situation is different in the EU. Article 102 TFEU provides the legal basis for the intervention in cases where the patent owner imposes excessive royalties. Although there are only few cases where the Commission has condemned such practices, the patent owner's imposition of exploitative licensing conditions might be considered anticompetitive.

Further, the two systems differ also in their relation towards exclusionary practices. A review of the past cases indicates that US courts have in general adopted a less interventionist approach, in comparison to their EU counterpart. Section 2 of the Sherman Act, and Section 5 of the FTCA (which enforcement seems to largely correspond with that of Section 2 of the Sherman Act) impose fewer limitations to the patent owner's conduct than Article 102 TFEU. A clear example is a case concerning a refusal to license patents. Whereas the Commission and the ECJ confirmed that in exceptional circumstances a refusal to license an IPR may constitute anticompetitive conduct, such outcome is much less likely under U.S. antitrust law.

Several reasons might explain the differences between the approaches adopted in the two jurisdictions. Kovacic suggests that the differences between the EU competition law and U.S. antitrust law should be at least partially attributed to the difference between the antitrust enforcement mechanisms in place in the two

jurisdictions.²⁸² He suggests that characteristics of the U.S. antitrust enforcement, such as private rights of action with mandatory treble damages, asymmetric shifting of costs, broad rights of discovery, class actions, and jury trials, stimulated courts to adopt a more lenient treatment toward firms' unilateral conducts. Plaintiffs may be interested in using antitrust law to secure a commercial advantage, rather than pursuing the public interest. As a result, U.S. courts have adopted a more cautious approach before condemning business conduct, and have established relatively demanding standards that private plaintiffs must satisfy to demonstrate that a specific conduct constitutes an antitrust violation. In the EU, on the contrary, where the enforcement is predominantly in the hands of a public authority, there was less need for strict legal standards, assuming that the authorities would select cases to pursue the public interest.

The two jurisdictions seem to also have different beliefs regarding the market structure that provides better incentive for innovation. Both systems recognize that competition law and IPRs stimulate innovation. They nonetheless seem to favor different policies to achieve this goal. In the EU, the Commission considers that the maintenance of competitive market conditions is the primary tool to foster innovation, even though it requires granting access to a proprietary input. The EU approach thus seems to reflect the position of Arrow and other economists, who believe that competition provides more incentives to innovate.²⁸³ U.S. courts, on the contrary, seem to rely more on the protection of private property, including IPRs, as a tool to foster innovation. As emphasized by the Supreme Court, forcing undertaking to share the fruits of their investment might harm their incentive to make further investments.²⁸⁴ The approach adopted in the United States, reflects very much the position of Schumpeter and other economists, who maintain that monopolies are necessary to stimulate firms to invest in research and development. They can generate more innovation through the "creative destruction", where monopolies of different firm

282 W. E. Kovacic, *Competition Policy in the European Union and the United States: Convergence or Divergence?*, Bates White Fifth Annual Antitrust Conference (June 2, 2008), available at <http://www.ftc.gov/speeches/kovacic/080602bateswhite.pdf>.

283 K. ARROW, *ECONOMIC WELFARE AND THE ALLOCATION OF RESOURCES FOR INVENTIONS*, RATE AND DIRECTION OF INVENTIVE ACTIVITY (Princeton University Press, 1962).

284 *Verizon Comm'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004).

succeed each other. In their view, monopolies are the main drivers of technological and innovative progress in society.²⁸⁵

Having analyzed the basic doctrines that govern the relationship between competition law and patent rights, we can now turn our discussion on the SEP owners' antitrust liability. The next chapters will analyze the SEP owner's liability for the various licensing practices. The analysis will assess whether the divergences between EU competition law and U.S. antitrust law identified in this chapter hold also in cases addressing the SEP holder's conduct.

²⁸⁵ J. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* (Kessinger Publishing 1943).

PART II

THE SEP OWNER'S MARKET POWER

Competition authorities and courts have scrutinized the SEP owner's conduct through provisions addressing unilateral practices. Despite the large number of cases, the scope competition law has in addressing the SEP owner's conduct remains nonetheless unsettled. The second part of this book aims to bring some clarity to this picture, by identifying the types of conduct that might lead to an antitrust liability under EU competition law and U.S. antitrust law.

The present chapter focuses primarily on the evaluation of the SEP owners' market power—an essential element of the unilateral conduct offence under both EU competition law and U.S. antitrust law. This chapter analyzes which circumstances should be taken into account when assessing the SEP owner's market power.

1. THE CURRENT APPROACH TOWARDS THE SEP OWNER'S MARKET POWER

The evaluation of the SEP owner's market power is an essential element of the violation of Article 102 TFEU, Section 2 of the Sherman Act, as well as the Section 5 of the FTCA offence.²⁸⁶

As explained in the previous chapter, none of the jurisdictions provides a presumption of market power for patent owners. A similar principle applies in the context of SEPs. In the EU, the Commission explicitly stated that “even if the establishment of a standard can create or increase the market power of IPR holders . . . there is no presumption that holding or exercising IPR essential to a standard equates to the possession . . . of market power.”²⁸⁷ Similarly, in the United States, none of the Supreme Court decisions state that there is a presumption of monopoly power for a SEP owner. In *Townshend v. Rochwell*, the District Court of the Northern District of California even maintained that “[t]he adoption of an industry standard

²⁸⁶ See discussion in Chapter III, [2.1. Patent owner's market power](#).

²⁸⁷ EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 269 (2010).

incorporating [a] proprietary technology does not confer any power to exclude that exceeds the exclusionary power to which a patent holder is otherwise legally entitled.”²⁸⁸ It concluded that the ownership of a SEP was not sufficient to prove the existence of monopoly power.

The approach adopted in practice is however not always consistent. On some occasions, courts and competition authorities have been more willing to conclude that a SEP owner holds strong market power. For example, in *Broadcom v Qualcomm*, the Third Circuit held that the “the incorporation of a patent into a standard . . . makes the scope of the relevant market congruent with that of the patent.”²⁸⁹ The District Court of San Jose also adopted a narrow market definition in dispute between Apple and Samsung, accepting Apple’s argument that Samsung’s SEPs formed its own relevant market, in which Samsung had a monopoly.²⁹⁰ The European Commission adopted a similar approach in the approval of the merger between Google and Motorola Mobility. The European Commission acknowledged that once a patented technology becomes standard essential, the existence of competing standards might mitigate the concerns with opportunistic practices.²⁹¹ It however also stated that

[t]he specificity of SEPs is that they have to be implemented in order to comply with a standard and thus cannot be designed around, i.e. there is by definition no alternative or substitute for each such patent. Therefore, each SEP constitutes a separate relevant technology market on its own.²⁹²

Defining the market so narrowly, around the individual technology protected by a SEP, necessarily leads to finding each SEP owner dominant in the market of its technology. It basically results in a presumption of dominance of monopoly power for every SEP owner.

The different approaches adopted by courts and competition agencies leave some uncertainty regarding the evaluation of the SEP owner’s market power. Does the

288 *See, e.g.*, *Townshend v. Rockwell Intl. Corp.*, 2000 WL 433505, at 35 (N.D. Cal. 2000).

289 *Broadcom Corp. v. Qualcomm Inc.*, 501 F. 3d 297, 315 (3rd Cir. 2007).

290 *Apple Inc. v. Samsung Elecs*, Case No. 11-CV-01846, 99 (N.D. California).

291 Case No COMP/M.6381 -Google/Motorola Mobility - Merger procedure, EUR-Lex, at 53 (Dec. 17, 2008).

292 *Id.* at 54.

implementation of a technology in an industry standard confer market power? Is the narrow market definition around the individual SEP, which considers the SEP owner *per se* dominant, in line with the economic theory? Is a SEP owner necessarily dominant or a monopolist?

In order to answer these questions, the next paragraphs analyze the effects that the inclusion of a patented technology in the industry standard has on the SEP owner's market power. As it will be explained, the ownership of a SEP *might* confer market power, but this is not necessarily the case. There is consequently no valid justification to introduce a presumption of dominance or monopoly power for SEP owners.

2. THE ECONOMIC PERSPECTIVE

2.1. *Intra-standard and inter-standards competition*

The inclusion of a patented technology in an industry standard can certainly confer market power to the SEP owner. When selecting the technologies to be implemented in the standard, there might be several available alternatives, some of which are available in the public domain, whereas others (generally the majority) are protected by patent rights. At this stage, the technology owner's market power depends largely on the quality of its technology, and on the available alternatives. When there are several alternatives available, it is unlikely that the technology owner will be able to charge high royalties. Potential licensees can shift to the use of alternatives in response to an increase in price.

The standardization process nonetheless eliminates the intra-standard competition, that is, the competition among technologies that compete for the implementation in the standard.²⁹³ Once the standard is set, the available alternatives are eliminated, and the chosen technology becomes essential for the standard. At this point, potential licensees are not able to react to an eventual increase in royalties, given that switching to alternatives would require a revision of the standard—a

293 P. Chappatte, *FRAND Commitments—The Case For Antitrust Intervention*, 5 EUROPEAN COMPETITION JOURNAL 319, 324 (2009).

process that is generally lengthy and extremely expensive. The inclusion of a patented technology in an industry standard might thus confer some degree of market power.

The implementation of a technology in a standard does however not necessarily confer the level of market power leading to dominance or a monopoly. Although there is no doubt that the implementation of the standard *can* confer incremental market power to the SEP owner, the actual level of obtained market power is an empirical, rather than a theoretical question. Incremental market power is defined as difference between the SEP owner's market power after the implementation of its technology in the standard and the market power it had before the implementation. Its magnitude is contingent on several factors, such as the success of the standard and the competition that the standard faces from alternative standards and non-standardized products.

There are several situations where the implementation in the standard does not confer any significant level of market power. First, not every standard succeeds. Some standards are not accepted by the market, and are never implemented by a substantial number of manufacturers. In this case, the implementation of a technology in a standard does not confer any significant level of market power to the SEP owner.²⁹⁴ An example of an unsuccessful standard is the first SDRAM standard adopted by JEDEC, which later adopted the standard including the much-discussed patents held by Rambus. The first SDRAM standard was not implemented as quickly or as widely as anticipated, and consequently JEDEC decided to begin to work on a next-generation standard. Although the standard included two Rambus' patents, the inclusion did clearly not confer any substantial level of market power to the company.²⁹⁵

Second, even after the implementation in the standard, the SEP owner might still face constraints from other standards (inter-standard competition), or from non-standardized products. There are several industries where competing standards coexist and compete among each other. One example is the market for high-speed,

294 A. Fuchs, *Patent Ambush Strategies and Article 102 TFEU*, in MORE COMMON GROUND FOR INTERNATIONAL COMPETITION LAW (Warren S. Grimes Josef Drexler, Clifford A. Jones, Rudolph J. R. Peritz, Edward T. Swaine ed. 2011) ("There is, however, no guarantee that a standard announced by an SSO will really govern an economic market or a whole industry."). The FTC made a similar observation in the Dell investigation, maintaining that only "[o]nce [the] standard had become widely accepted, the standard effectively conferred market power upon Dell as the patent holder." Dell Computer Corp., N. 3658, F.T.C. (May 20, 1996).

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

high-quality computer games, where Sega, Nintendo, and Sony compete by relying on different standards.²⁹⁶ When manufacturers can choose among competing standards, or standardized and non-standardized products, the SEP's owners might not be able to behave independently from its consumers, or control prices and thus exclude competition. Also in this case, the implementation of a patented technology in a standard does not necessarily confer to the SEP owner a considerable level of incremental market power.²⁹⁷

There are nevertheless standards that are very successful and become the predominant solution adopted in the market. A clear example is a case where the compliance with the standard becomes a *de facto* market requirement. A *de facto* standard faces little or no competition from alternative standards. In such circumstances, it will be difficult—if not impossible—for the potential licensees to react to the SEP owners' opportunistic conduct. At the same time, a collective reaction to the SEP owners' opportunism might be difficult to implement, given that it would require all the manufacturers to collectively switch to a new standard: a change that is often difficult to implement in practice.²⁹⁸ As a result, the SEP owner might be able to behave independently from its competitors, consumers, and customers (using the EU

296 See, e.g., D. L. Rubinfeld, Competition, Innovation, And Antitrust Enforcement In Dynamic Network Industries (Mar. 4, 1998), *available* at <http://www.justice.gov/atr/public/speeches/1611.htm> (noting that where network effects are sufficiently limited, or offsetting factors sufficiently strong to permit multiple networks to survive in the marketplace, there is a strong competition among coexisting networks ("multiple standards")).

297 See, e.g., Deborah Platt Majoras, Chairman F.T.C., Recognizing the Procompetitive Potential of Royalty Discussions in Standard Setting, Remarks at Standardization and the Law: Developing the Golden Mean for Global Trade 10, at 3 (Sept. 23, 2005), *available* at <http://www.ftc.gov/speeches/majoras/050923stanford.pdf> ("if the chosen standard has to compete with rival standards, the owner of the SSO's chosen technology may end up with little market power."). Commissioner Azcuenaga made a similar observation in the dissent concerning the FTC action against Dell, pointing out that the inclusion of Dell's patented technologies in the standard did not necessary confer market power. If computer producers could switch to bus designs that did not incorporate Dell's technology, no monopoly was possible (Dissent, Dell Computer Corporation, Consent Order, etc., Docket No. C-3658 (1996)). Also the European Commission recognized that "restrictive effects are most unlikely in a situation where there is effective competition between a number of voluntary standards." It emphasized that where there are "several competing standards or in the case of effective competition between the standardised solution and non-standardised solution, a limitation of access (to the standard) may not produce restrictive effects on competition." (EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶¶ 269, 277, 294 (2010)).

298 E. Ramirez, Oversight of the Impact on Competition of Exclusion Orders to Enforce Standards-Essential Patents (Jul. 11, 2012), *available* at <http://www.ftc.gov/speeches/ramirez/120711septmtofftc.pdf> (noting that it may not be feasible to deviate from the standard unless all or most other participants in the industry agree to do so in compatible ways.).

definition of dominant position), and will be able to control prices or exclude competition (using the U.S. definition of monopoly power). In those circumstances, the implementation of the patented technology in the standard confers to the SEP owner considerable level of incremental market power, leading to dominance and/or monopoly.²⁹⁹

Courts and competition authorities were thus correct in noting that SEPs differ from regular patents.³⁰⁰ The inclusion of a patented technology in an industry standard might confer market power to its owner and lead to dominance and monopoly.³⁰¹ However, the market power does not arise directly from the implementation in the standard, but rather from the success of the standard. Only the implementation in a *successful* industry standard that is widely adopted by the market is able to confer considerable market power leading to dominance or monopoly.

In sum, the economic theory does not support the presumption of market power for SEP owners. As in the case of other patents, the ownership of a SEP does not necessarily confer a dominant position or monopoly power, but there is a need to evaluate the SEP owner's market power on a case-to-case basis.

2.2. The relevance of sunk costs and the lock-in effect

The discussion of the SEP owner's market power has often focused on the presence of sunk costs and the lock-in effect.³⁰² The argument can be summarized as

299 For a detailed discussion on *de facto* standards see: Chapter II, [1.3](#).

300 For EU see: EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 269 (2010) (“(B)y virtue of its IPR, a participant holding IPR essential for implementing the standard, could, in the specific context of standard-setting, also acquire control over the use of a standard.”) For the United States see: *Research in Motion Limited v. Motorola Inc.*, 644 F.Supp.2d 788, 791 (N.D. Tex. 2008) (“Once a patent becomes an essential patent, it gains undue significance as a result”); *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3rd Cir. 2007) (“Essential patents are very different from normal patents.”).

301 See, e.g. H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87, 89 (2007) (“Some, but certainly not all, standards are capable of conferring significant market power.”).

302 See, e.g., *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 310 (3rd Cir. 2007) (“Industry participants who have invested significant resources developing products and technologies that conform to the standard will find it prohibitively expensive to abandon their investment and switch to another standard. They will have become “locked in” to the standard.”); U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION at 35 (2007); S. Michel, *Bargaining for RAND Royalties in the Shadow of Patent Remedies Law*, 77 ANTITRUST LAW JOURNAL 889, 892 (2011).

follows. Manufacturers have generally made specific investments to design their product to comply with the standard. The manufacturer's investment is specific to the transaction and has a lower value, or no value, for other purposes. It is lost if the manufacturer switches to the use an alternative standard, or produces a non-standardized product. Because of its sunk investment, the manufacturer might not be able to react to the SEP owner's opportunistic conduct, and it might find itself locked in the use of the standard, and consequently of the SEP. In the view of some commentators, the presence of sunk costs can thus confer to the SEP owner the ability to hold up manufacturers and extract from them unfair licensing conditions.

However, the ability to hold up a specific manufacturer only shows the SEP owner's *bargaining* (circumstantial) power, and does not necessarily indicate the existence of market power. Bargaining power created by a consumer's investment is not uncommon, even in perfectly functioning, competitive markets. Consider for example a case where A purchases an apartment from B, without clarifying the exact price for the parking place next to the apartment. Once A buys the apartment, B can act opportunistically, and ask an exorbitant price for the parking place. Because of the investment in the apartment, A will agree to pay a higher price than it would agree *ex ante*. Although opportunistic, most would agree that B's behavior is not an action that could be challenged under competition law. B might be an individual owner of the apartment, without any market power and ability to affect the prices in the market. In the same vein, the SEP owner's ability to hold up specific manufacturers does not necessarily indicate the presence of market power. The presence of sunk costs and the consequent lock-in effect does not necessarily indicate the existence of market power with the meaning of competition law.

The distinction between bargaining and market power is not always clear in the courts' practice. In *Kodak*, the U.S. Supreme Court relied on sunk costs to infer the existence of monopoly power.³⁰³ Eastman Kodak was a supplier of high-volume photocopiers and micrographic equipment, and also sold and installed replacement parts for its machines. Independent service organizations (ISOs) were servicing Kodak equipment. Kodak adopted a policy which limited ISOs' ability to compete: it refused to sell its photocopier and micrographic parts to ISOs, and sold its replacement parts

303 *Eastman Kodak Co. v. Image Technical Services*, 504 U.S. 451 (1992).

only to equipment owners that bought repair services from Kodak, or provided their own service. ISOs brought an action against Kodak, claiming that the conduct was anticompetitive. In evaluating the presence of market power, the Supreme Court found that Kodak had a monopoly power in its own aftermarket. It maintained that customers that had purchased Kodak photocopiers were “locked-in” the use of the machines, given their initial investments in the primary market (i.e. Kodak’s machines), and the consequent high “switching costs”. In the Supreme Court’s view, this conferred upon Kodak the ability to charge monopoly aftermarket prices for replacement parts.

The Supreme Court’s decision was nonetheless criticized in the dissenting opinion. Justice Scalia emphasized the need to distinguish between bargaining power and monopoly power. Justice Scalia maintained that

[t]he leverage held by a swimming pool contractor when he discovers a 5-ton boulder in his customer’s backyard and demands an additional sum of money to remove it; or the leverage held by an airplane manufacturer over an airline that has ‘standardized’ its fleet around the manufacturer’s models; or the leverage held by a drill press manufacturer whose customers have built their production lines around the manufacturer’s particular style of drill press. Leverage, in the form of *circumstantial* power, plays a role in each of these relationships; but in none of them is the leverage attributable to the dominant party’s market power in any relevant sense.³⁰⁴

Justice Scalia added that “[t]hough that power can plainly work to the injury of certain consumers, it produces only a brief perturbation in competitive conditions—not the sort of thing the antitrust laws do or should worry about.”³⁰⁵ Through these statements, Justice Scalia explained that the bargaining power the incumbent enjoys over its customers because of the presence of sunk costs does not necessarily indicate the incumbent’s market power, and its ability to affect competition in the market.

304 *Eastman Kodak Co. v. Image Technical Services*, 504 U.S. 451, 497-498 (1992).

305 *Id.* at 498.

The legal literature has similarly criticized the *Kodak* decision for confusing the undertaking's bargaining power and the undertaking's market power.³⁰⁶ Also courts have generally limited the application of the *Kodak* judgment to very narrow circumstances.³⁰⁷ It is possible to state that the current legal practice recognizes that the specific investments of individual manufacturers and the consequent lock-in effect are not sufficient to prove market power.³⁰⁸

The same economic reasoning should apply in the SEP context. The mere fact that some manufacturers have invested in the implementation of the standard and face sunk costs should not be sufficient to prove the existence of market power. "The mere existence of sunk costs in any particular industry . . . does not necessarily mean that entry barriers are high or that competition within the market is not effective."³⁰⁹

There are nevertheless situations where the presence of a lock-in effect will confer on the SEP holder significant market power. This might be the case when an entire industry is locked in the use of a specific standard. In such circumstances, the

306 Several academics criticized the judgment of the Supreme Court, suggesting that it should be overruled. (See e.g., H. Hovenkamp, *Post-Chicago Antitrust: A Review and Critique*, 2 COLUMBIA BUSINESS LAW REVIEW 257 (2001) ("The central conclusion is that the Supreme Court's controversial Kodak decision has done more harm than good and should be overruled"); B. H. Kobayashi & J. D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 469 (2009) ("The Court's opinion in Kodak has been widely criticized for confusing the issue of a single firm's power over its own price, and the proper concept of antitrust market power that requires the firm to have the power to control market prices."); D. A. J. Goldfine & K. M. Vorrasi, *The Fall of the Kodak Aftermarket Doctrine: Dying a Slow Death in the Lower Courts*, 72 ANTITRUST LAW JOURNAL 209, 213 (2004).

307 Goldfine and Vorrasi conducted an analysis evaluating the application of the *Kodak* judgment by lower courts. They found that courts have applied the ruling in very limited circumstances. Court considered defendants dominant in their aftermarket only when the following circumstances are met: (i) consumers face high switching costs, (ii) there needs to be information asymmetry on the side of consumer, which are typically not well informed when initially purchasing in the primary market, and thus not able to fully assess the life-cycle cost of owning the primary good, (iii) the defendant abuses the locked-in consumers by employing some type of opportunistic conduct. Even if the listed circumstances were met, courts could still reject to find the defendant monopolist, based on some additional consideration such as non-interchangeability of aftermarket products, or independence of primary and aftermarket decisions. In the *Queen City Pizza, Inc. v. Domino's Pizza, Inc.* (Domino's Pizza), for instance, the court rejected the application of the *Kodak* ruling to a franchise agreement that required a franchisee to purchase pizza dough from Domino's. As clarified by the court, franchisees had to acquire the products from Domino's Pizza not because of Domino's strong market power, but because of contractual requirements. See: D. A. J. Goldfine & K. M. Vorrasi, *The Fall of the Kodak Aftermarket Doctrine: Dying a Slow Death in the Lower Courts*, 72 ANTITRUST LAW JOURNAL 209 (2004).

308 See, e.g., *Queen City Pizza, Inc. v. Domino's Pizza, Inc.*, 124 F.3d 430 (3rd Cir. 1997) ("[O]ne cannot equate power over a firm's own product's price, which occurs frequently within competitive industries, with the ability to affect the market price, which is the proper concern of antitrust policy.").

309 OFFICE OF FAIR TRADING, *Assessment of Market Power: Understanding Competition Law*, § 5.11 (2004), available at http://www.oft.gov.uk/shared_of/business_leaflets/ca98_guidelines/oft415.pdf.

lock-in effect represents a barrier to entry, and it might consequently affect the ability of potential competitors to challenge the SEP owner's conduct.

In sum, relying solely on evidence of sunk investment and lock-in effect might be misleading. It might lead to find the SEP holder dominant or a monopolist even when it does not have significant market power. The presence of a sunk investment alone will generally not be sufficient to prove the existence of the SEP owner's market power. It might however indicate the existence of market power if the sunk costs and customers' lock affects a significant part of the market, and thus represent a significant entry barrier.

2.3. *The risks of a narrow market definition*

The criticisms presented in the previous section do not aim to state that courts and competition authorities were wrong in finding SEP owners dominant or monopolists. Most cases addressed in the EU and in the United States did, in fact, concern SEPs implemented in standards widely adopted by the market. In the *Unocal* case, the SEP owner owned patents which were essential for a standard, the compliance with which was directed by the California Clean Air Act.³¹⁰ Companies had no other option that comply with the standard. In the *Rambus* case, the SEPs were implemented in a voluntary standard, which nonetheless enjoyed great market success. The Commission pointed out that "virtually all market participants confirmed that it is commercially indispensable to comply with JEDEC standards in order to be able to sell DRAM chips on the Community or worldwide market."³¹¹ Also in the cases concerning the conduct of companies such as Qualcomm, Motorola, and Samsung, their SEPs were implemented in the UMTS standard (the so-called third generation (3G) standard for GSM-path networks), a fundamental requirement for the participation in the mobile wireless telephony market.³¹² Given that manufacturers

310 Complaint, Union Oil Company Of California, Docket No. 9305 (F.T.C. 2003)

311 COMP/C-3/ 38 636 Rambus (Rejection Decision).

312 As explained in the *Qualcomm* judgment, a mobile device contains computer "chipsets"—the core electronics that allow it to transmit and receive information from the wireless network. In order to allow the transmission of information, manufactures need to produce their product in compliance with specific standards that allow the interoperability of product. Two standards are in widespread use today: the code division multiple access (CDMA), and the global system for mobility (GSM) standard. Cellular telephone service providers operate under one or the other path. For example, Verizon Wireless

operating in the market had no alternative (that is, no option to compete by adhering to alternative standards or produce non-standardized goods), the SEP did most probably represent its own relevant market, in which the SEP owner was dominant. The finding of dominance was thus justified.

The legal reasoning provided by the courts and competition authorities was nonetheless often imprecise. It was not the implementation in the standard, and the presence of sunk costs that conferred significant market power to the SEP owner, but rather the implementation in a successful, widely adopted industry standard. Similarly, it seems incorrect to state that the implementation of a technology in the standard makes the scope of the relevant market congruent with that of the SEP.³¹³ Although in some cases the SEP might represent its own market, this is not necessarily the case. Such a market definition is not appropriate for cases where there is substantive inter-standard competition. Potential licensees can switch to the use of alternative standards or non-standardized products in response to an increase in price—or more precisely an increase in a licensing fee—for the use of the SEPs.

Defining the market too narrowly and illegitimately considering a SEP owner dominant, although it is not, might have important negative consequences for the antitrust intervention. Most importantly, there is a risk that private disputes will illegitimately be turned into antitrust cases, despite having little potential of imposing anticompetitive effects.³¹⁴ This represents a waste of public resources,³¹⁵ particularly when the enforcement is carried by a public authority. At the same time, competition

and Sprint Communications operate under the CDMA-path networks, and AT&T and T-Mobile under the GSM-path networks. The two paths are not interoperable: the equipment and technologies used in one cannot be used in the other. The standard used in current generation GSM-path networks is the third generation ("3G"), and is known as the Universal Mobile Telecommunications System ("UMTS") standard. All manufacturers producing devices operating on the GSM-path network have to comply with the UMTS standard. (*Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 303-304 (3rd Cir. 2007)).

313 *Id.* at 351.

314 U.S. DOJ, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT REPORT, Chapter 2 (2008) (report withdrawn in May 2009) ("The costs that firms, courts, and competition authorities would incur in identifying and litigating liability, as well as devising and policing remedies for any and all conduct with the potential to have a minor negative impact on competition for short periods, would almost certainly far outweigh the benefits, particularly if the calculus includes, as it should, the loss of pro-competitive activity that would inevitably be discouraged in such a system.").

315 *See, e.g.*, Robert H. Bork & Gregory J. Sidak, The Misuse of Profit Margins To Infer Market Power, 9 JOURNAL OF COMPETITION LAW AND ECONOMICS 511, 511 (2013); B. H. Kobayashi & J. D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 469(2009) ("Application of the antitrust laws in the absence of antitrust market power will result in frequent type I error").

law is an inappropriate means of resolving private disputes: it provides strong remedies which are properly reserved for conducts that affect market competition in a significant way.

Therefore, the market power of each SEP owner needs to be evaluated by taking into account the circumstances of the specific case. In doing so, courts and competition authorities should apply the traditional mechanisms used when defining the relevant market and assessing market power. In particular, courts and competition authorities should evaluate whether the SEP owner faces significant competitive constraints from alternative standards and not standardized products available in the market.³¹⁶ Only when the SEP owner faces insignificant constraints, should the SEP owner be considered dominant and/or a monopolist.

In our further discussion, we will for simplicity assume that the implementation of the patented technology confers to the SEP owner a dominant position, i.e. monopoly power. It should be nevertheless borne in mind that this assumption does not always hold.³¹⁷

316 H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87, 89 (2007). (“[w]hen compatibility with the standard is technologically essential, or if a government rule requires that a specific standard be followed, standards can have significant exclusionary power provided that they are difficult to appropriate.”).

317 This approach has been suggested by the Commission in the 2010 Guidelines, where it states that in the “absence of market power, a standardization agreement is not capable of producing restrictive effects on competition.” (EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 277 (2010)).

DECEPTIVE CONDUCT DURING THE STANDARDIZATION PROCESS

The present chapter focuses on the first of the two identified groups of opportunistic practices: the SEP owner's deceptive behavior during the standardization procedure. The analysis shows that both in the EU and in the United States the SEP owner might face antitrust liability for acting deceptively during the standardization process. However, contrary to the general intuition, the analysis shows that the SEP owner is more likely to face liability under U.S. antitrust law. The chapter is structured as follows. The first section discusses the different types of deceptive practices, and evaluates the negative effects that they may impose on the market. Second, the chapter analyzes the applicability of Article 102 TFEU, Section 2 of the Sherman Act, and Section 5 of the FTCA, and evaluates the circumstances in which an antitrust liability could arise. The chapter also discusses the possibility of a more expansive reading of competition law, in a way to capture conducts that fall outside the traditional antitrust doctrines. Finally, the chapter compares the approaches of the two jurisdictions and outlines the limitations competition law faces in addressing the SEP owner's deceptive conduct.

1. TYPES OF DECEPTION

Participants of the standardization process might have an interest in their technology being implemented in a standard. The ownership of a SEP may provide several benefits to the owner, such as generating licensing revenue, facilitating cross licensing, and signaling technological competence.³¹⁸ Each participant (including NPEs and practicing entities) may consequently aim to demonstrate the superiority of

³¹⁸ Knut Blind et al., Study on the Interplay between Standards and Intellectual Property Rights (IPRs), at 12 (Tender No ENTR/09/015 2011).

its technology and in this way obtain its implementation in the standard. As a result, there is generally competition among participants of the standardization process for the implementation of their technology in the standard.

A strong competition in the technology market is indeed desirable. The problem arises, however, if participants of the standardization process do not compete based on merit, but engage in deceptive practices. For example, the SEP owner can make an affirmative false statement to the SSO, by maintaining that it holds no patent covering the technology relevant for the standard under discussion. Only once the patented technology is implemented in the standard, and its use becomes essential for all manufacturers of standard-compliant goods, the SEP owner reveals the existence of its patent, and starts with the legal enforcement. Alternatively, the SEP owner might not make an affirmative false statement, but only stay silent and hide the existence of its patent interest, until the technology has been implemented in the standard. It is also possible that the SEP owner discloses the existence of its patents, but falsely commits to license them on FRAND terms. Once the technology is implemented in the standard, the owner reneges its commitment, and offers its SEPs only on non-FRAND licensing terms.

These three types of deceptive practices might have several undesirable effects. Most importantly, the SEP owner's deceptive conduct during the standardization process might affect competition in the technology market, where technologies compete for the implementation in the standard. By hiding the existence of its patent rights, or making a false FRAND commitment, the SEP owner confers to the participants of the standardization procedure the wrong impression that its technology is available at no cost, or in the case of a false FRAND commitment, available on FRAND terms. This might induce the SSO to implement the SEP owner's technology in the standard, although if full information were available, alternative technologies would be selected. By engaging in a deceptive practice, the SEP owner can thus exclude competitors from the technology market.

The SEP owner's deceptive behavior might have also other negative consequences. It may lead to the adoption of a suboptimal standard, if, as result of the deception, suboptimal technologies are implemented in the standard. The SEP owner's deception might also facilitate patent holdup. In the *Rambus* case, for example, the patent ambush allowed Rambus to avoid FRAND commitments, and consequently

charge allegedly excessive royalties. Some commentators suggested that the SEP owner's deceptive conducts might also hinder the success of the standardization process, by diminishing the manufacturers' incentives to produce goods in compliance with the standard, but also decrease the undertakings' interest in participating in further standardization activities. By undermining the success of standards and of the standardization process, the SEP owner's deceptive conduct in turn deprive consumers from the benefits brought by standardization.

Competition authorities on both sides of the Atlantic have expressed their strong concerns with the SEP owner's deceptive practices during the standardization process.³¹⁹ In parallel to this, companies have challenged the SEP owners' deceptive practices through the antitrust provisions in private legal actions.³²⁰ The next section will analyze the applicability of the antitrust provision to SEP owner's deceptive behavior and identify the circumstances in which the SEP owner's deceptive conduct might lead to an antitrust liability.

2. ANTITRUST LIABILITY

2.1. *Liability under EU competition law*

In the EU, there is so far no formal decision concerning the SEP owner's liability for patent ambush, false FRAND commitments or other deceptive practices that might arise during the standardization process. The Commission's approach adopted in the *Rambus* cases suggests that such practices could constitute an abusive behavior in

319 For the EU see: Press Release, N. Kroes, European Commissioner for Competition Policy, Commission Accepts Commitments from Rambus Lowering Memory Chip Royalty Rates, SPEECH/09/575 (Dec. 9, 2009), *available* at http://europa.eu/rapid/press-release_SPEECH-09-575_en.htm ("An effective standard-setting process should take place in a non-discriminatory, open and transparent way to ensure competition on the merits and to allow consumers to benefit from technical progress and innovation"); For US see: Complaint, Rambus Inc., 9302, F.T.C. (Jun 18 2002) (maintaining that deceptive practice during the standardization process resulted in increased royalties, increased prices for memory products compliant with JEDEC standards, decreased incentives to produce memory using JEDEC-compliant memory technology, and decreased incentives to participate in standard-setting organizations.).

320 *See, e.g.* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297 (3rd Cir. 2007); Research in Motion Limited v. Motorola Inc., 644 F.Supp.2d 788, (N.D. Texas, 2008).).

violation of Article 102 TFEU.³²¹ A detailed analysis nonetheless unveils the opposite result: the SEP owners' deceptive practices would lead to an antitrust liability only in very limited circumstances.

The legal analysis requires the distinction between two groups of participants of the standardization process: (1) SEP owners that have a dominant position since the beginning of the standardization procedure, and (2) owners that have low market power at the beginning of the standardization process, but acquire market power as result of the implementation of their technology in the standard. As it will be explained, Article 102 TFEU has different scopes in addressing the conducts of the SEP owners belonging to the two groups.

2.1. A. SEP owners' dominance at the time of the deception

Article 102 TFEU clearly applies to a SEP owner that is dominant at the time of deception. Despite the absence of legal precedents in the context of SEPs, doctrines developed in other areas suggest that the SEP owner's deceptive conduct during the standardization process can constitute an abuse of a dominant position in violation of Article 102 TFEU.

The *AstraZeneca* judgment provides an important guidance for the evaluation of the SEP owner's deceptive conduct.³²² The Commission condemned under Article 102 TFEU the deceptive behavior of AstraZeneca, a pharmaceutical group dominant in the market for proton pump inhibitors. In particular, AstraZeneca (1) made misleading representations before the patent offices and national courts of several Member States when applying for supplementary patent protection certificates,³²³ deregistered its drug marketing authorizations in some Member States. The Commission maintained that the first conduct allowed AstraZeneca to obtain (or maintain) supplementary protection certificates, for which AstraZeneca was not entitled or to which it was entitled for a shorter duration. The deceptive behavior allowed AstraZeneca to keep

321 In the Rambus investigation, the Commission extensively discussed the effect of Rambus' patent ambush on the JEDEC's standardization process. European Commission, Rejection Decision, Case COMP/C-3/ 38 636 Rambus, European Commission (2010).

322 Case C-457/10 P AstraZeneca AB and AstraZeneca plc v European Commission, ECR 00000 (2012).

323 A supplementary protection certificate is a mechanisms adopted in the EU that allows the extension of the patent right after its expiration date. The supplementary protection aims to compensate the patent owner for the reduction in the period of the effective patent protection, resulting from the time needed to obtain the authorization to place the patented product on the market.

manufacturers of generic products away from the market. Similarly, the deregistration of the marketing authorization aimed to ensure that the registration would not be available to AstraZeneca's competitors—producers of generic drugs—and it would thus keep them out of the market after patent expiration (at least for some time). The Commission found that the two deceptive practices constituted an abuse of a dominant position in violation of Article 102 TFEU, and the decision was later confirmed in the much criticized judgment of the General Court. The General Court emphasized that Article 102 prohibits “a dominant undertaking from eliminating a competitor and thereby strengthening its position by using methods other than those which come within the scope of competition on the merits.”³²⁴ The General Court maintained that AstraZeneca's deceptive conduct did not represent competition on the merits, and did not comply with the special responsibility of a dominant undertaking to abstain from any conduct that impairs undistorted competition in the market. It thus concluded that AstraZeneca's conduct amounted to an abusive behavior in violation of Article 102 TFEU.³²⁵

AstraZeneca appealed the decision, arguing, *inter alia*, that the General Court adopted a legally flawed approach to the concept of competition on the merits. Several commentators similarly criticized the General Court's decision, pointing out that the adopted standard suggests that any objectively misleading statement to the patent office would amount to abuse of a dominant position.³²⁶ Even a genuine and honest error made by a dominant company in the context of a patent application process, would amount to an abuse. The Court of Justice rejected AstraZeneca's appeal, nonetheless adopting a narrower definition of competition on the merits, which corrected some of the criticisms of the General Court's decision. The ECJ agreed that a misleading practice, even if undertaken by a dominant undertaking, does not *per se* constitute an abusive behavior. It emphasized that dominant undertakings do not need to be infallible. Not “each objectively wrong representation made by [a dominant]

324 T-321/05 *Astra Zeneca v European Commission*, E.C.L.R. 31(12) 00000, at 354 (2010).

325 *Id.* at 354, 355, 361, 811-817.

326 *See, e.g.*, Blog, Gavin Bushell, Case C-457/10 P, *AstraZeneca v Commission*, Judgment of 6 December 2012, *available at* <http://kluwercompetitionlawblog.com/2012/12/07/case-c-45710-p-astrazeneca-v-commission-judgment-of-6-december-2012/>.

undertaking constitute[s] an abuse of that position.”³²⁷ The ECJ nevertheless emphasized that a deceptive conduct *may* amount to an abuse, if it leads to anticompetitive effects. The Court found that AstraZeneca’s deception had such effects. The misleading statements induced public authorities to grant an exclusive right to which AstraZeneca was not allowed. In this way, the AstraZeneca’s deceptive conduct raised regulatory obstacles to competition.³²⁸ The ECJ also noted that there was no legitimate justification for AstraZeneca’s deregistration, and the conduct only aimed at preventing, or making more difficult, the entrance of competing generic drugs into the market.³²⁹

Although the circumstances of the AstraZeneca case differed considerably from the one in the SEP context, the judgment bears important implications for the SEP owners’ liability. A dominant SEP owner has, as any other dominant undertaking, a duty to abstain from any conduct that impairs undistorted competition in the market. The SEP owner’s deceptive conduct does not comply with such responsibility. The Astra Zeneca judgment nonetheless clarifies that a deception does, alone, not lead to an antitrust liability. A bad act is not considered abusive simply because undertaken by a dominant SEP owner. The SEP owner’s deceptive behavior would constitute an abusive behavior only if it imposes anticompetitive effects on the market, such as, the exclusion of rival technologies from the standard. The Astra Zeneca judgment thus suggests that in order to prove that the SEP owner’s deceptive behavior constituted a violation of Article 102 TFEU, the competition authority needs to prove both the existence of a bad act and the presence of anticompetitive effects.

A separate question concerns the relevant standard of proof that the Commission would have to meet in order to show that the SEP owner’s deception amounts to a violation of Article 102 TFEU. Does the Commission have to prove that the SEP owner’s deceptive behavior actually excluded competing technologies from the standard? Would it be sufficient for the Commission to assert that the deceptive

327 Case C-457/10 P AstraZeneca AB and AstraZeneca plc v European Commission, ECR 00000, 99 (2012).

328 *Id.* at. 105-106.

329 In particular, the de-registration prevented manufacturers to benefit from the exemption to have to carry out pharmacological and toxicological tests and clinical trials for the purposes of demonstrating the harmlessness and efficacy of the product in question. *Id.* at 117.

conduct could have had anticompetitive effects, without however showing that such effects have arisen in the specific case?

The ECJ maintained in several occasions that in order to prove that a conduct is anticompetitive, the Commission does not need to show that the anticompetitive effect is concrete, but it is sufficient to demonstrate that there is a potential for such anticompetitive effect.³³⁰ This might suggest, *prima facie*, that the Commission could condemn the SEP owner's deceptive conduct, without having to show that the deception had an actual anticompetitive effect, but merely by asserting that such effect could arise in practice. In other words, the Commission could condemn under Article 102 TFEU the SEP owner's deceptive practices without proving that the deception excluded alternative technologies from the standard.

However, a deeper analysis suggests that this standard of proof is not appropriate. The ECJ has allowed the Commission to condemn conducts even in the absence of evidence of anticompetitive effects, because there was a risk that the challenged conduct would lead to an anticompetitive effect, unless aborted. If the Commission would have to wait for the anticompetitive effects to arise in practice, the antitrust intervention would be obsolete. This idea is particularly clear in the context of predatory prices, where the intervention may take place before the predatory pricing strategy excludes rivals. The situation is nonetheless different when addressing the SEP owner's deceptive behavior. The SEP owner's deception is likely to have exclusionary effects only at the time of the selection of the standard, hence, before the antitrust intervention. If the deception did not have an exclusionary effect at the time, it is highly unlikely that an anticompetitive effect will arise in the future. There is no risk that the deceptive conduct will lead to an anticompetitive effect, unless aborted. Consequently, on difference of cases such as predatory pricing, it seems that the appropriate standard of proof would require the Commission to show that the SEP owner's deceptive behavior actually had an anticompetitive effect on the technology market, for example, by excluding competing technologies. In the absence of such evidence, the condemnation of the SEP owner's conduct through the provisions of competition law seems not appropriate. It is also worth noting that under EU law, the SEP owner's liability could arise also in absence of an anticompetitive *intent*. The

³³⁰ *Id.* at 112 (referring to *TeliaSonera Sverige* at 64).

concept of abuse is an objective concept and does not require evidences of intent.³³¹ Under this scenario, Article 102 TFEU could condemn cases where the SEP owner's *unintentional* failed to disclose a patent during the standardization procedure. The prosecution of such cases seems nonetheless not desirable from a policy perspective. Commissioner Azcuenaga noted that it is one thing to prohibit a knowing misrepresentation or an intentional manipulation, and another thing to prohibit an involuntary failure to disclose the patent interest.³³² Standards are often complex and rely on several hundred patents. The failure to disclose a patent might be the result of pure oversight or a problem of patent's interpretation.³³³ Imposing a competition law liability for the SEP owner's involuntary failure to disclose a patent might have negative effects on the company's incentives to participate in a voluntary standardization process. The prospect of facing strong antitrust remedies, including a monetary fine and antitrust damages, because of an involuntary oversight might deter companies for future contributing their technologies to the standard. The risk they would face might be simply too high. Under this scenario, the antitrust enforcement could deter participation in the standardization process and thus harm exactly the process that it aims to preserve. Policy considerations hence suggest that, although Article 102 TFEU could be applied also to cases of an unintentional failure to disclose relevant patents, it is appropriate to limit the intervention to cases where the SEP owner's deceptive behavior is intentional.

In sum, Article 102 TFEU provides a legal basis to address a large spectrum of deceptive practices undertaken by SEP owners that are dominant at the time of deception. It seems nonetheless desirable to limit the scope of the intervention to cases where the challenged behavior was intentional, and where the Commission can provide evidences that the SEP owner's conduct had actual anticompetitive effects. When those conditions are met, the SEP holder's deceptive behavior should be considered an abuse of a dominant position.

331 *See, e.g.*, T-321/05 *Astra Zeneca v European Commission*, ECR. 31(12) 00000, at 356 (2010); *Hoffmann-La Roche & Co. AG v Commission*, 85/76, ¶ 91 (1979); Case C-62/86 *AKZO Chemie BV v Commission of the European Communities*, ECR I-03359, at 69 (1991)

332 *Dell Computer Corp.*, N. 3658, 630 (F.T.C. May 20, 1996) (Dissent).

333 M. Dolmans, *Standards for Standards*, 26 *FORDHAM INTERNATIONAL LAW JOURNAL*, 163, 185 (2002).

2.1.B. SEP owners that are not dominant at the time of deception

The outcome of the legal analysis is very different in cases addressing the conduct of the second group of participants, that is, SEP owners that do not have substantive market power during the standardization process, but obtain it after the adoption of the standard. The absence of a dominant position at the time of deception prevents the application of Article 102 TFEU to the SEP owner's deceptive conduct.³³⁴ A non-dominant undertaking does not have the special responsibility under Article 102 TFEU to abstain from a conduct that impairs undistorted competition in the market. As a result, Article 102 TFEU does not apply to the deceptive conduct of a SEP owner that was not dominant at the time of deception.

An antitrust liability can only arise, if after the implementation in the standard, and the consequent obtainment of a dominant position, the SEP owner engages in an abusive practice. In the Rambus case, for example, the Commission maintained that Rambus abused its dominant position “by claiming unreasonable royalties . . . subsequent to a patent ambush.”³³⁵ It is nonetheless important to notice that the abusive conduct lays in the imposition of excessive royalties, and not in the patent ambush itself. Patent ambush only facilitated the abusive behavior, which occurred later on, when Rambus already had a dominant position.³³⁶ The potential liability for such conduct, that is, the impositions of excessive royalties, will be discussed in details in the next chapter. For now, it is important to notice that the mere deceptive practice

334 See, e.g., *Id.* at 187 (“This means that at the moment of the concealment, the IPR owner may not be dominant and may not be caught by Article 82 EC”); D. Geradin & M. Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 2 EUR. COMPETITION JOURNAL 101, 153 (2007) (“If the IPR owner only obtained its dominant position in the market for the standardised technology ex post the deceptive behaviour, it would be difficult to make a case for the applicability of Article 82 EC.”) A. Fuchs, *Patent ambush strategies and Article 102 TFEU*, in MORE COMMON GROUND FOR INTERNATIONAL COMPETITION LAW (Warren S. Grimes Josef Drexler, Clifford A. Jones, Rudolph J. R. Peritz, Edward T. Swaine ed. 2011) (“[T]he market dominance must already have existed at the time of the alleged abuse”).

335 Press Release, Antitrust: Commission confirms sending a Statement of Objections to Rambus, MEMO/07/330 (Aug. 23, 2007), available at http://europa.eu/rapid/press-release_MEMO-07-330_en.htm (emphasis added).

336 The Statement of Objections, the Commission provisionally concluded that claiming such royalties was incompatible with Article 102 TFEU, in light of the specific circumstances of this case. (*Id.*) This position was repeated also in the discussion of the appropriateness of remedies, where the Commission states that “As the competition concerns arise from the fact that Rambus may be claiming abusive royalties for the use of its patents at a level which it would not have been able to charge absent its conduct, the Commission considers that the Commitments (imposing a cap on the royalties) are sufficient [.]” (Rejection Decision in Case COMP/C-3/ 38 636 Rambus, at 83 (2010)).

of a non-dominant SEP owner, without a subsequent abuse, falls outside the domain of Article 102 TFEU.

Given that the majority of the participants of the standardization process are not dominant at the time of deception, it is evident that Article 102 TFEU faces an important limitation in addressing the deceptive conducts that arise during the standardization process. Deceptive practices would remain largely unpunished under EU competition law.

In light of such limitations, one could argue that the Commission and the ECJ should opt for a more extensive reading of Article 102 TFEU that would allow the Commission to prosecute also the deceptive conduct of a SEP owner that is not dominant at the time of deception. One of the principal goals of Article 102 TFEU is to prohibit conducts that impedes effective competition by excluding competitors on some basis other than merit.³³⁷ A deceptive practice during the standardization process might have exactly such effect, given that it might allow the SEP owners (including a non-dominant one) to illegitimately exclude competing technologies from the standard. It might thus represent aptly the type of conducts that the competition law aims to prevent. The Commission could thus adopt an approach which recognizes that when a deceptive act of a non-dominant SEP owner allows the company to obtain a dominant position through an anticompetitive practice, the conduct would still fall under the prohibition of Article 102 TFEU. In other words, the Commission could interpret Article 102 TFEU in a way to include acts of successful monopolization.

Although tempting, an extensive reading of Article 102 TFEU is not desirable for several reasons. First, there is a legal argument against the extension of Article 102 TFEU to the conduct of a SEP owner that was not dominant at the time of deception. None of the established legal doctrines would in fact allow the application of Article 102 TFEU to a non-dominant company. It is true, for instance, that the ECJ maintained that Article 102 TFEU does not require the company to be dominant in the

³³⁷ Both schools of thought that affected the development of EU competition law (the Harvard School and the Ordoliberal school) argued that competition law should protect the competitive process. This is clearly reflected in the ideas of the ordoliberal school, which promoted the concept of economic freedom, which required the protection of the competitive process. The Commission confirmed this objective also in the Guidelines, by stating that “what really matters is protecting an effective competitive process and not simply protecting competitors”. (Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, C 45/7, ¶ 6 (2009)).

market where the challenged conduct imposes anticompetitive effect. In *Tetra Pak*, the ECJ maintained that the dominated market and the market where the abuse takes place do not need to coincide.³³⁸ However, in *Tetra Pak*, the company did hold a dominant position at the time when it engaged in the anticompetitive conduct, although the anticompetitive effects arose in a market where the company was non dominant. The situation is different in the context of SEPs, where, at the time of the deception, the SEP owner does not have a dominant position in *any* of the markets. The *Tetra Pak* ruling can hence not apply. Further, in *Continental Can*, the ECJ maintained that “[t]he very wording of . . . Article [102] shows that it is not concerned with the creation . . . of dominant positions.”³³⁹ Therefore, no matter how creative one can be with the application of Article 102 TFEU, case of monopolization undertaken by a non-dominant SEP owner simply fall outside the prohibition of Article 102 TFEU.

Second, the extension of Article 102 TFEU to non-dominant SEP owners is not desirable from a policy perspective. It is true that the application of Article 102 TFEU to non-dominant SEP owners would allow the Commission to address practices that would otherwise remain unpunished under EU competition law. It is however also true that an extensive reading of Article 102 TFEU does not come without costs. First, tailor made solutions might undermine the consistency in the application of competition law, and legal predictability.³⁴⁰ Second, introducing an exception to the rule that Article 102 TFEU applies only to dominant undertakings might open a Pandora’s box for a wider application of Article 102 TFEU outside the context of SEPs. The Commission could try to extend the reach of Article 102 TFEU to non-dominant undertakings also outside the standardization context. This might be a dangerous tool, if not administered with sufficient safeguards. The broad scope of Article 102 TFEU, coupled with the generally low standard of proof, would in fact confer to the Commission a broad discretion in addressing the business decisions of undertakings. Although this does not necessarily imply that an extension of Article 102 TFEU to non-dominant SEP owner is undesirable, it indicates that there are some important risks associated with the extension of the provisions to non-dominant SEP owners.

338 *See, e.g.*, *Tetra Pak International SA v. Commission*, ECR I-05951, at.30, 31 (1996).

339 *Case 6/72 Europemballage Corp. v Continental Can Company Inc.*, ECR 1973, 215 at 224 (1973).

340 For a general discussion on “ad-hocisms”, although in the context of international human right law see: Andrea Bianchi, *Ad-hocism and the Rule of Law*, 13 EUROPEAN JOURNAL OF INTERNATIONAL LAW 263 (2002).

Extending the reach of Article 102 TFEU to non-dominant undertaking is a serious step that should be taken with great caution.

Third, the market had showed the ability to adopt mechanisms to mitigate the risk that SSO's participants (including non-dominant one) will engage in deceptive practices. Both SSOs and their participants have strong incentives to prevent individual's misconduct.³⁴¹ After cases of patent ambush, several SSOs have revised their internal in the way to avoid the possible deceptive practices of its participants. Those rules, which will be discussed in greater details in chapter VIII, seem to be effective in mitigating deceptive practices of both dominant and non-dominant SEP owners. The existence of mechanisms that can mitigate the SEP owner's deceptive practices suggest, therefore, that an extensive reading of Article 102 TFEU might provide little incremental benefits if extended to the conduct of non-dominant SEP owners.

2.2. Liability under U.S. antitrust law

2.2.A. Section 2 liability

The SEP owner's deceptive conduct is more likely to lead to antitrust liability under U.S. antitrust law. In contrast to Article 102 TFEU, Section 2 of the Sherman Act applies to all participants of the standardization process, irrespective from their initial level of market power. The language of Section 2 makes clear that it is unlawful for *any* person to monopolize, or attempt to monopolize the market.³⁴² As noted by Areeda, “[n]o matter how small may be the defendant's power at the time of the anticompetitive conduct, it violates Section 2 if monopoly power actually results from the conduct or would . . . probably result from it [unless aborted].”³⁴³

341 See, e.g., Federal Trade Commission and the Department of Justice, Sherman Act Section 2 Joint Hearing / Understanding single-firm behavior: Misleading and deceptive conduct Session, Statement of Gil Ohana, at 54 (2006), *available* at <http://www.ftc.gov/os/sectiontwohearings/docs/transcripts/061206.pdf> (“The deceptive practices in standards development . . . runs contrary to our interests. They reduce our incentives to participate in standards development, and they reduce our confidence that the products we ship will not infringe.”).

342 Sherman Antitrust act, Ch. 647, 26 Stat. 209, 15 U.S.C., § 2 §1-7, § 2 (1890).

343 P. AREEDA & H. HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION, Vol. 3, 331-332 (Apsen Publ. 2002).

U.S. antitrust law thus recognizes that certain type of conducts might impose anticompetitive effects even if employed by an undertaking with little market power.³⁴⁴ Although an undertaking with little market power often lacks the ability to render the monopolizing strategy successful, there are circumstances in which its conduct might result in a successful monopolization. A clear example is the enforcement of a patent obtained by fraud. Even a company with no market power might obtain a patent through a misleading statement to the Patent Office, and in this way it might be able to unlawfully obtain market power.³⁴⁵ The situation is similar in a market that has strong network effects, where the deceptive conduct of an undertaking with little or no market power might still be a successful monopolization strategy. What matters for antitrust evaluation is therefore not the SEP owner's level of market power at the time of the deception, but rather the evaluation whether the deceptive conduct, coupled with the position of the SEP owner, leads (or would lead) to the acquisition of monopoly power.³⁴⁶

U.S. courts have recognized that the SEP owner's deceptive conduct during the standardization process can constitute an anticompetitive behavior actionable under the Sherman Act.³⁴⁷ Anticompetitive behavior comprises any conduct which aims to obtain or maintain monopoly power as a result of competition on some basis other

344 *Id.* at 651 (nothing that some conducts "challenged as exclusionary could be profitable for either a monopolist or a non-monopolist."). Even more, Section 2 might condemn an undertaking even if that conduct does not result in monopoly power, but meets the elements of the "attempt to monopolize" offence. The undertaking must have a dangerous probability of monopolizing the market.

345 *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.* for instance concerned a dispute between Food Machinery & Chemical Corp, (hereafter Food Machinery) and Walker Process Equipment (hereinafter Walker Process). Food Machinery filed a patent infringement suit against Walker Process, which denied the infringement and counterclaimed for a declaratory judgment that the patent was invalid. Food Machinery subsequently dismissed its complaint because the patent had expired. Walker Process however amended its counterclaim, arguing that Food Machinery had illegally monopolized the market by fraudulently obtaining and maintaining its patent, while knowing that it had no basis for the patent right. The counterclaim alleged that Food Machinery used the patent to exclude Walker Process from the market through "threats of suit" and prosecution of this infringement suit. The Supreme Court confirmed that the enforcement of a patent procured by fraud on the Patent Office may be violation of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present. (*Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 US 172 (1965).

346 P. E. AREEDA & H. HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION*, 332 (Aspen Pub 2001) ("The relevant question is whether the challenged conduct, coupled with the market position of the undertaking, at that time lead or would have lead to the acquisition of monopoly power.").

347 *See, e.g., Rambus Inc. v. Federal Trade Commission.*, 522 F. 3d 456, 463 (D.C. Cir. 2008) ("We assume [...] that if Rambus' more complete disclosure would have caused JEDEC to adopt a different (open, non-proprietary) standard, than its failure to disclose harmed competition and would support a monopolization claim."); *Broadcom Corp. v. Qualcomm Inco.*, 501 F. 3d 297, 313-314 (3rd Cir. 2007).

than merit.³⁴⁸ If the deception allows the SEP owner to obtain or maintain monopoly power through unlawful means, it constitutes a basis for a Section 2 liability.³⁴⁹

The FTC addressed the SEP owner's deceptive conduct first in *Union Oil Company of California*.³⁵⁰ In the 1980s, the California Air Resources Board (CARB), a department of the California Environmental Protection Agency, started rulemaking proceedings to determine regulations and standards governing the composition of low emission, reformulated gasoline. Unocal participated in the proceedings. It however did not reveal its patent interest, but allegedly created the "false and misleading impression" that it did not possess (or that at least it would not enforce) patents that could be relevant for the discussed standard. After the adoption of the standard, when the refining industry modified its products in a way to comply with the adopted regulation (and the standard), Unocal announced that it held patents that were covered by the standard, and made clear its intention to collect royalties from the manufacturers.

The FTC started a legal action against Unocal, maintaining that Unocal's deceptive behavior during the standardization process constituted an anticompetitive behavior. In the FTC's view, CARB would not have adopted regulations that substantially overlapped with Unocal's patents, but for Unocal's deception. The misleading declarations allowed Unocal to obtain the implementation in the standard and illegally acquire monopoly power in the technology market for producing CARB gasoline. The FTC concluded that the deception amounted to a violation of Section 5 of the FTCA (equivalent to a Section 2 violation). The complaint was nevertheless not litigated, but solved with a consent order where Unocal agreed to stop enforcing the relevant reformulated gasoline patents.³⁵¹

The antitrust liability for the SEP owner's deceptive conduct was discussed again in *Broadcom v Qualcomm*.³⁵² Qualcomm was the owner of several patents essential for the UMTS standard adopted by ETSI. The company took part in the standardization

348 See, e.g., *United States v. Grinnell Corp.*, 384 US 563, 570-71 (1996); *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

349 HERBERT J. HOVENKAMP, *Patent Continuations, Patent Deception, and Standard Setting: the Rambus and Broadcom decisions*, UNIVERSITY OF IOWA LEGAL STUDIES RESEARCH, 9 (2008).

350 Complaint, *Union Oil Company of California*, N. 9305, F.T.C. (Mar. 4, 2003).

351 Decision and Order, *Union Oil Company of California*, N. 9305, F.T.C. (Aug. 2, 2005).

352 *Broadcom Corp. v. Qualcomm Inc.* 501 F. 3d 297, (3rd Cir. 2007).

procedure, disclosed its patent, and offered to license them on FRAND terms, if its technology was implemented in the standard. However, after the implementation in the standard, Qualcomm allegedly ignored its commitments, and offered non-FRAND licensing conditions. Broadcom brought an action against Qualcomm, maintaining that Qualcomm's false commitments constituted an act of monopolization, in violation of Section 2 of the Sherman Act. The District court initially dismissed the complaint: the Court of Appeals for the Third Circuit however reversed the decision, finding Qualcomm's behavior anticompetitive.

The Court of Appeal held that a FRAND commitment is a key indicator of the cost of implementing a potential technology, and a misrepresentations of the cost may confer an unfair advantage to the patent owner when competing for the implementation in the standard.³⁵³ Qualcomm's deceptive promise induced the SSO to underestimate the cost of the technology, and implement the technology in the standard. The implementation significantly expanded Qualcomm's market power, given that the UMTS standard was largely adopted by the market. Qualcomm did not obtain market power as a consequence of the superiority of its product, business acumen, or historical accident, but because of the false commitment. The Court of Appeals thus concluded that the deceptive conduct enabled Qualcomm to unlawfully obtain market power and constituted an act of monopolization in violation of Section 2 of the Sherman Act.³⁵⁴

In a later case brought against Rambus, the D.C. Circuit narrowed the scope of the potential liability for a deceptive conduct.³⁵⁵ Rambus was accused on intentionally concealing its patent interest during its participation in JEDEC standardization process, and revealing it only once its technology has been included in the standard.³⁵⁶ The FTC brought an action, alleging that Rambus' conduct constituted an anticompetitive conduct. The FTC suggested that had Rambus disclosed its patents two scenarios could arise: (1) alternative technologies would be implemented in the

³⁵³ *Id.* at 313.

³⁵⁴ *Id.* at. 314 – 317. (“(1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct.”).

³⁵⁵ *Rambus Inc. v. F.T.C.*, 522 F.3d 456 (D.C. Cir. 2008).

³⁵⁶ For a detailed description of the Rambus case see: INTRODUCTION: 1. [SETTING THE CONTEXT](#)

JEDEC's standard; or (2) if alternatives were not available, JEDEC still would have implemented Rambus' technology, but demanding Rambus to commit to license its patents on FRAND terms.

The D.C. Circuit confirmed that the first scenario represented an anticompetitive acquisition of market power in violation of Section 2 of the Sherman Act. It however emphasized that the FTC did not provide sufficient evidence that the first scenario occurred in practice. Rather the contrary: the FTC explicitly stated that there was insufficient evidence that JEDEC would have utilized other technologies had it known the full scope of Rambus' patent rights.³⁵⁷

The second scenario was also plausible. The D.C. Circuit rules, however, that the second scenario did not constitute an anticompetitive act. It explained that, in order to be considered anticompetitive, a conduct must harm the competitive process.³⁵⁸ However, Rambus' conduct did not harm the competitive process, if JEDEC would have selected Rambus' technology even in absence of deception.³⁵⁹ Rambus' deceptive conduct had "no particular tendency to exclude rivals and thus to diminish competition."³⁶⁰ There was in fact no evidence that competing technologies existed at all. Given that the second scenario did not constitute anticompetitive conduct, the D.C. Circuit concluded that the FTC failed to prove that Rambus' deception harmed competition and thus constituted an anticompetitive conduct. The D.C. Circuit also emphasized that deceptive conduct that merely allows the company to charge higher prices falls outside the domain of the Sherman Act. In analyzing the Rambus case, it recognized that Rambus' conduct might result in higher prices. It however emphasized that the higher prices are not the result of a less competitive market, but arise from the exercise of legitimate market power.³⁶¹

Part of the legal literature has heavily criticized the Rambus judgment.³⁶² Some commentators maintained that a deception that allows the SEP owner to avoid a

³⁵⁷ Rambus Inc. v. Federal Trade Commission. 522, F. 3.d. 456, 464, 466 (D.C. Cir. 2008).

³⁵⁸ *Id.* at 463.

³⁵⁹ *Id.* at 467.

³⁶⁰ *Id.* at 466.

³⁶¹ *Id.* at 465.

³⁶² See, e.g., M. W. Nelson G. S. Cary, S. J. Kaiser, & A. R. Sistla, *The Case For Antitrust Law To Police The Patent Holdup Problem In Standard Setting*, 77 ANTITRUST LAW JOURNAL 913, 919 (2011). R. Dagen, *Rambus, Innovation Efficiency, and Section 5 of the FTC Act*, 90 BOSTON UNIVERSITY LAW REVIEW 1479, 1484 (2010).

FRAND commitment should constitute an anticompetitive acquisition of market power.³⁶³ They pointed out that market power is defined as the ability to exclude rivals from the market place and the ability to control prices. A FRAND commitment constrains the SEP owner's ability to control the price of its SEPs: the illegitimate avoidance of a FRAND commitment should thus constitute an anticompetitive acquisition of market power. Some commentators also argued that the failure to punish conduct like that of Rambus could have detrimental effect for the standardization process, for example, by discouraging industry members from participating in standardization activities.³⁶⁴

It is however now clear that the Rambus case identified a failure of proof, rather than a failure of pleading. Courts have recognized that the SEP owner's deceptive conduct during the standardization process *can* provide the basis for a Section 2 liability. Nevertheless, proving only a deceptive act is not sufficient. A bad, malicious conduct does not constitute a violation of Section 2 if it does not harm competition in the market.³⁶⁵ It is not sufficient to prove that the deception allowed the SPE owner to avoid a FRAND commitment or charge higher prices. In order to bring a successful Section 2 claim, the plaintiff needs to prove that the deception allowed the SEP owner to *acquire* market power in an anticompetitive way.

Showing that the SEP owner's deceptive behavior lead to the anticompetitive acquisition of monopoly power requires proof of several facts. First, the plaintiff needs to prove that the technology in question would *not* be included in the standard (and no market power would be acquired), but for deception.³⁶⁶ If alternative technologies existed, the plaintiff needs to show that in absence of the deceptive practice, alternatives would be implemented in the standard. On the contrary, if there were no alternatives to the technology, the plaintiff needs to prove that the SSO would *not*

363 See, e.g., Statement of George Cary, Joint Hearing / Understanding single-firm behavior, at 69-70 (2006), available at <http://www.ftc.gov/os/sectiontwohearings/docs/transcripts/061206.pdf>.

364 See, e.g., D. A. Dorth, *The Rambus Shell Game: A Lack of Integrity in the Standards Setting Process*, 3 JOHN MARSHALL RIPL 138 (2003).

365 Brooke Group Ltd. V Brown & Williamson Tobacco Corp., 509 U.S. 209, 225 (1993). See also: H. J. Hovenkamp, *Patent Continuities, Patent Deception, and Standard Setting: the Rambus and Broadcom decisions*, UNIVERSITY OF IOWA LEGAL STUDIES RESEARCH PAPER (2008) ("Deception is ordinarily a business tort that only rarely raises serious 2 issues.").

366 Townshend v. Rockwell Intl. Corp., U.S. Dist. LEXIS 5070, 2000 WL 433505 (N.D.Cal.2000). ("In order to establish anticompetitive conduct, the plaintiff must show that the patent holder's failure to disclose its intellectual property rights induced the SSO to set the standard incorporating the essential patent").

include the technology in the standard, absent the deception.³⁶⁷ Second, the plaintiff needs to show that the SEP owner has monopoly power. As explained in the chapter on market power, the implementation of a technology in a standard does not necessarily confer the degree of market power leading to dominance or monopoly.³⁶⁸ Third, a successful Section 2 claim requires evidences of the SEP owner's anticompetitive intent. Although there is no need to prove the SEP owner's subjective intent, it would be nonetheless difficult to bring a successful action where the SEP owner shows that the failure to disclose a patent was unintentional.³⁶⁹

Past cases show, nonetheless, that it might be often difficult for the plaintiff to meet the required standard of proof and show that the SEP holder's deceptive behavior was anticompetitive. Courts were often reluctant to find patent ambush anticompetitive.³⁷⁰ Courts often saw the causal link between the SEP owner's deceptive behavior and the implementation in the standard (and the consequent acquisition of market power) as too weak.³⁷¹ Courts have noted that the SSO could have selected the very same technology even in absence of a deception, if the technology in question provided the only possible mean to realize a functional requirement, or if its price/quality ration was superior to those of the available alternatives. Even if alternatives existed, they were not necessarily available for free, or at lower costs. In other words, the SEP owner's technology could have been implemented in the standard (and market power acquired) also in absence of the ambush.

367 *Broadcom Corp. v. Qualcomm Inc.*, 501 F. 3d 297, 316 (3rd Cir. 2007).

368 See discussion in Chapter IV.

369 H. J. Hovenkamp, *Patent Continuations, Patent Deception, and Standard Setting: the Rambus and Broadcom decisions*, UNIVERSITY OF IOWA LEGAL STUDIES RESEARCH PAPER (2008) ("Under Section 2 [...] the defendant must act 'willfully' in acquiring or maintaining monopoly power. Thus, for Rambus's allegedly deceptive course of conduct to be actionable under the Sherman Act, Rambus must have acted willfully [...]").

370 *See, e.g.*, *Rambus Inc. v. Federal Trade Commission*, 522 F. 3d 456 (D.C. Cir. 2008); *Townshend v. Rockwell Intl. Corp.* U.S. Dist. LEXIS 5070, 2000 WL 433505 (N.D. Cal. 2000); *Apple v. Samsung*, WL 4948567, at 4 (N.D. Cal. Oct. 18, 2011).

371 Lemley noticed that the link between the deceptive conduct and the market power is not immediate, but relies on "a long chain of inference". "[T]he competitive risk is that the misrepresentation will cause an SSO to adopt a standard it otherwise would have rejected, and that the adoption of that standard will in turn confer on the defendant market power it would not otherwise have obtained. This is a rather long chain of inferences [...]" M. A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIFORNIA LAW REVIEW 1889, 1931 (2002).

Courts were, on the other hand, less reluctant to condemn cases addressing the SEP owner's false FRAND commitment. Courts generally saw the link between the false commitment and the acquisition of market power more easily.³⁷² In the Qualcomm case, for example, the court maintained "[a] FRAND commitment . . . is a factor—and an important factor—that the [SSO] will consider in evaluating the suitability of a given proprietary technology vis-a-vis competing technologies."³⁷³ It further added that by making a false FRAND commitment, and thus misrepresenting the costs, the SEP owner "may confer an unfair advantage and bias the competitive process in favor of that technology's inclusion in the standard."³⁷⁴ The court thus saw a clearer link between the SEP owner's deceptive behavior and the anticompetitive acquisition of monopoly power.

The approach adopted by courts was not uncontroversial. Some commentator argued that courts should apply a more lenient causation requirement between the SEP owner's deceptive conduct and the acquisition of market power. Dagen suggests that it should be sufficient to show that the conduct "reasonably appear[s] capable of creating or maintaining a monopoly," without however the need to prove that the deception actually has such effect in practice.³⁷⁵ He points out that unlike other practices such as predatory pricing, or tying, SEP owner's deceptive conduct have no pro-competitive potential, and there is consequently a lower risk that a strict application of Section 2 will unduly chill pro-competitive conduct.³⁷⁶ In his view, courts should be hence adopt a lower standard of proof when scrutinizing the SEP owner's deceptive behavior.

Dagen's criticism is however not well founded. Several arguments support the maintenance of a strict causation requirement. A strict causation requirement is in line with the principle that, when addressing the conduct of undertakings with little level of market power at the time of the deception, there is a stronger need to prove

³⁷² See, e.g., *Research in Motion Limited v. Motorola Inc.* 644 F. Supp. 2d 788 (ND Texas 2008); *Broadcom Corp. v. Qualcomm Inc.*, 501 F. 3d 297 (3rd Cir. 2007).

³⁷³ *Broadcom Corp. v. Qualcomm Inc.*, 501 F. 3d 297, 313 (3rd Cir. 2007).

³⁷⁴ *Id.*

³⁷⁵ R. Dagen, *Rambus, Innovation Efficiency, and Section 5 of the FTC Act*, 90 BOSTON UNIVERSITY LAW REVIEW 1479, 1491 (2010).

³⁷⁶ *Id.*

causation between the challenged act and the acquisition of market power.³⁷⁷ Second, the approach is also in line with the principle that fraudulent or misleading practices should be considered a Section 2 Sherman Act violation only when there is clear evidence of anticompetitive effects.³⁷⁸ If the deception excluded alternative technologies from the standard, or allowed the SEP owner to obtain the implementation in the standard, the anticompetitive effects are clear and Section 2 should apply. However, if it is not possible to prove any of these outcomes, the deception did perhaps not have relevant *antitrust* consequences. Competition law is not an instrument to prosecute bad acts in general, but only those that impose a substantial harm to competition.³⁷⁹

Finally, introducing a lower standard of proof might also impose important costs. As pointed out by Kobayashi and Wright

[w]hile it is true that deceptive conduct lacks pro-competitive virtue and therefore mitigates some of the concerns about error costs and favors enforcement all else being equal, it goes too far to argue that the presence of such conduct eliminates those concerns or demonstrates that the benefits of enforcement outweighs its associated administrative and error costs.³⁸⁰

As will be explained in chapter VIII, antitrust remedies have a severe impact on the violator, and it seems reasonable to limit their use to conducts that have clear, and

377 P. E. Areeda and H. J. Hovenkamp emphasize that evidence of causation is crucial when dealing with defendant who lack monopoly power at the time of their anticompetitive behavior. “Even for a conduct that would be clearly called exclusionary for a firm with substantial market power, it should be deemed exclusionary for a firm that later achieves such power only when we may reasonably conclude that the conduct made a significant contribution of the subsequently acquired power.[...] If there is any substantial doubts whether conduct would have sufficiently significant anticompetitive effect to be called exclusionary for a firm possessing substantive market power, that conduct should not be deemed exclusionary for a firm lacking power at the time when it acted.” P. E. AREEDA & H. J. HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* 332 (Aspen Publ. 2001).

378 *See, e.g., Id.* at 321–33; P. Schultheiss & W. E. Cohen, Cheap Exclusion: Role and Limits, Working paper (2009), *available* at <http://www.ftc.gov/os/sectiontwohearings/docs/section2cheapexclusion.pdf>; S. A. Creighton, Cheap Exclusion (2005), *available* at <http://www.ftc.gov/speeches/creighton/050425cheapexclusion.pdf>.

379 H. Hovenkamp, *The Federal Trade Commission and the Sherman Act*, 62 FLORIDA LAW REVIEW 1,2 (2010) (“[B]usiness torts can encompass many kinds of deceptive or unfair conduct, often without regard to anticompetitive consequences.”).

380 B. H. Kobayashi & J. D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 469,489 (2009).

identifiable anticompetitive effects. This does not imply that deceptive practices that do not meet such requirement should remain unpunished. It is nonetheless more desirable to address those cases through other rules, as for instance, the SSO's internal regulation, than through antitrust law.

In sum, the SEP owner's deceptive conduct can constitute an act of monopolization in violation of Section 2 of the Sherman Act. To bring a successful Section 2 claim, the plaintiff needs to nonetheless prove that the deception allowed the SEP owner to obtain the implementation in the standard, and through this, acquire monopoly power. In absence of such evidence, the conduct will fall outside the domain of Section 3 of the Sherman Act.

2.2.B. Section 5 liability

As explained, Section 5 of the FTCA covers all the prohibitions embodied in the Sherman Act, but it might capture also practices that are not explicitly prohibited by the act, but are nonetheless against its spirit.³⁸¹ In the view of some commentators, the provision could address SEP owner's deceptive practices that fall outside the domain of the Sherman Act.³⁸² For example, the FTC could address through Section 5 cases as Rambus, where there is no evidence that the SEP owner's deception excluded competing technologies in the technology market, but it nonetheless (allegedly) allowed the SEP owner to charge excessive prices.

The FTC addressed the SEP owners' deceptive conduct through Section 5 of the FTCA already in the action brought against *Dell Computers* in 1996.³⁸³ Dell took part in the standardization process of the Video Electronics Standards Association (VESA), however its representative falsely certified that the proposed standard did not infringe any of Dell's patents. Only after VESA adopted the standard, and an important part of industry members started producing their goods in compliance with it, Dell informed manufacturers about the existence of its SEPs and invited manufacturers to enter into licensing agreements. The FTC maintained that Dell's threat to exercise undisclosed patent rights unreasonably restrained competition contrary to Section 5. The conduct

381 For a discussion of Section 5 of the FTCA as a standalone offence see: Chapter III: [1.3.C. Section 5 of the FTCA](#).

382 See, e.g., Concurring Opinion Of Commissioner Jon Leibowitz, Rambus, Inc., Docket No. 9302. (Aug 2, 2006).

383 Complaint, Dell Computer Corp., N. 3658, F.T.C. (May 20, 1996).

hindered the industry's acceptance of the VESA standard, it increased the costs of the standard implementation, and chilled the undertakings' willingness to engage in the standard-setting process.³⁸⁴ The FTC also argued that in light of VESA's strong preference for standards that do not include proprietary technology, there was clear evidence that the SSO would have implemented a different non-proprietary standard in absence of Dell' deception.³⁸⁵ The FTC stated that enforcement action against this kind of behavior under Section 5 was particularly appropriate, given that Section 5 provides only for prospective relief, a remedy the FTC considered appropriate in cases where the legal and economic theories are (or more precisely "were" at the time) somewhat novel.³⁸⁶

The FTC's complaint brought against Dell was not uncontroversial. The dissent of Commissioner Azcuenaga pointed out that the complaint did "not articulate a violation of Section 5 of the FTCA under any established theory of law."³⁸⁷ In the Commissioner's view, the majority opinion did not provide a detailed determination of the elements of Section 5 standalone offence, nor did it assess whether they were present in Dell's case.³⁸⁸ In other words, while the FTC presented theories of harm, it did not explain which facts triggered the standalone application of Section 5. The case was finally concluded with a consent agreement, in which Dell agreed to desist from asserting its SEPs against the users of the standard. Thus, it remained unclear whether, and under which conditions, the SEP owner's deceptive during the standardization process constitutes a standalone violation of Section 5 of the FTCA.

Several years later, in 2002, the FTC brought another action challenging the SEP owner's deceptive conduct as a Section 5 standalone offence.³⁸⁹ In *Rambus*, the FTC determined more precisely the elements of the offence, by emphasizing that such offence requires evidence of: (1) the defendant's market (but not monopoly) power, (2) an anticompetitive or exclusionary practice (unfair practice), (3) and adverse effects on competition, although not necessarily rising to the level of monopolization.³⁹⁰ The FTC

³⁸⁴ *Id. at 9.*

³⁸⁵ *Id. at 624.*

³⁸⁶ *Id. at 626.*

³⁸⁷ Dissent, Dell Computer Corp., N. 3658, 627, F.T.C. (May 20, 1996).

³⁸⁸ *Id.*

³⁸⁹ Complaint, Rambus Inc, N. 9302, 124, F.T.C. (June 18, 2002).

³⁹⁰ Rambus Inc, N. 9302, 249, F.T.C. (Feb 23, 2004) (Administrative Law Judge Decision).-

maintained that Rambus' conduct met the elements of the Section 5 stand-alone offence. In the FTC's view, Rambus engaged in an unfair practice, by making affirmative misleading statements to JEDEC, and concealed its patent interests, in violation the JEDEC's disclosure policy. At the same time, the FTC maintained that Rambus' conduct violated a duty of good faith Rambus owed to the SSO by participating in the standardization procedure. Such conduct was in the FTC's view clearly anticompetitive, had the effect to unreasonably restraining trade in the relevant markets, and allowed Rambus to obtain market power.³⁹¹ It thus concluded that Rambus' conduct amounted to a standalone violation of Section 5 of the FTCA.

The Administrative Law Judge (ALJ) dismissed the FTC complaint based on the Section 5 standalone offence. The ALJ confirmed that Section 5 allows the FTC to proscribe a conduct which, although not violation of the letter of the antitrust laws, is close to a violation or is contrary to their spirit.³⁹² It nevertheless noted that, while Congress intentionally left open the term "unfair", the determination that a conduct constitutes an unfair method of competition must have "a reasonable basis in law." It further explained that, given that the FTC did not assert that Rambus' conduct was collusive, coercive, predatory, and it failed to prove it was exclusionary, it had to prove that Rambus' failure to disclose its patent interest was unfair *on some other basis of law*. However, the ALJ found that the FTC did not establish a valid legal basis on which Rambus' conduct could be considered unfair. First, the ALJ refused the FTC's suggestion that the decree adopted in the Dell case established that SEP owners participating in the standardization process have a duty to act in good faith. The ALJ emphasized that decrees provide no precedential value, and could thus not be considered as imposing a duty on participants of the standardization process.³⁹³ Next, the ALJ determined that Rambus did not violate a disclosure duty, given that the JEDEC's policy only encouraged, but did not mandate, the disclosure of relevant patents.³⁹⁴ Further, the invitation to disclose included only patents, and not patent

³⁹¹ *Id.* at 253-255.

³⁹² *Id.* at 254 (referring to *E.I. du Pont de Nemours & Co.*, 729 F.2d 128, 136-137 (2nd Cir.1984)).

³⁹³ *Id.* at 257. The ALJ noted also that, even if the decree would provide a relevant authority, the facts in the Rambus case were different from the one present in the Dell investigation. On difference of VESA's policy, which provided an affirmative disclosure requirement, JEDEC's rules did not impose a clear disclosure duty (*Id.* at. 255-256).

³⁹⁴ *Id.* at 261-274. The ALJ also noted that some JEDEC's participants, as for instance IBM, explicitly announced that they would not disclose intellectual property, stating that "it is up to user of the

applications, or intention to file patent applications. During the standardization process, Rambus however did not have any valid patent, but only pending patent applications. Finally, the ALJ emphasized that in the absence of a duty to disclose, Rambus' had a legitimate business justification for not disclosing its patent interest before the patent were granted, given that applications are generally kept confidential as long as possible.³⁹⁵ It thus concluded that FTC failed to prove evidences that the Rambus conduct should be considered unfair on any basis of law.

The FTC case against Rambus was later brought to the Court of Appeals for the D.C. Circuit. However, the FTC relied solely on the monopolization claim, dropping the allegation of Section 5 standalone offence.³⁹⁶ The D.C. Circuit nonetheless presented its opinion on the eventual liability under Section 5 and it expressed concerns with the FTC's finding that Rambus' conduct was deceptive or misleading. The D.C. Circuit maintained that the FTC reading of the SSO' written policies stretched the policies' language, which provided an invitation to disclose only existing and pending patents, but did not address the duty to disclose future patent applications. It further noted that

[o]ne would expect that disclosure expectations . . . requiring competitors to share information that they would otherwise vigorously protect as trade secrets would provide "clear guidance" and "define clearly what, when, how, and to whom the members must disclose."³⁹⁷

standard to discover which patents apply", and there were no evidence that JEDEC took any action against such participants.

395 *Id.* at 288 ("The protection of trade secrets is a valid business justification for not disclosing information regarding pending patent applications and intentions to file applications or to amend pending claims in the future. F. 1076. Disclosure of trade secrets, including pending patent applications or intentions to file or amend future applications, even after a parent patent application becomes public, may: (1) jeopardize the issuance of pending claims by enabling competitors to file patent interferences or to race to be first-to-file in certain foreign jurisdictions; and (2) result in a loss of competitive advantage by informing competitors of the firm s research and development focus or by inducing competitors to begin work around efforts earlier.").

396 *Rambus Inc. v. FTC*, 522 F.3d 456, 462 (D. C. Cir. 2008) (maintaining that the SEP owner's deceptive behavior during the standardization process constitutes a violation Section 2 of the Sherman Act only if it has an exclusionary effect on other technologies that were competing for the implementation in the standard. For detailed discussion see: Chapter V: [2.2.A. Section 2 liability](#).

397 *Id.* at 468.

The Court of Appeals thus ruled that “[a]lthough antitrust can serve as a useful check on abuses of the standard-setting process, it cannot substitute for a general enforcement regime for disclosure rules.”³⁹⁸

None of the past cases brought by the FTC have determined whether, and under which conditions, the SEP owners’ deceptive conduct could constitute a standalone violation of Section 5. It remains consequently unclear whether a SEP owner’s deceptive practice can trigger a liability under Section 5, despite not meeting the elements of the Section 2 violation.

A speculative analysis nonetheless suggests that even when the SEP owner’s conduct should be clearly considered unfair, the FTC would have to prove an adverse effect on competition.³⁹⁹ Indeed, the deception might have several adverse effects. It is nevertheless necessary to evaluate whether those effects represent a harm to competition, with the meaning of antitrust law. The FTC suggested that the SEP owner’s deceptive conduct might have an adverse effect on competition if it results in increased royalties and consequently in higher price for standard compliant goods.⁴⁰⁰ However, in the Rambus case, the D.C. Circuit refused to accept such effect as a harm to competition, and it is questionable whether courts would adopt a different position when evaluating the applicability of Section 5 of the FTC.⁴⁰¹ It is therefore possible that evidence of an increase in royalties might be insufficient to prove that the SEP owner’s deceptive conduct has an adverse effect on competition and thus constitutes a Section 5 standalone offence. The FTC suggested that the SEP owner’s deceptive conduct also has other adverse effects, such as delay in the adoption of the standard, undermine the confidence in the standardization process, and consequently deprive consumers of the benefits brought by the standardization.⁴⁰² This line of argument is more persuasive, and harm to the standardization process and ultimately consumer might provide a type of harm to competition recognized under the FTCA.

³⁹⁸ *Id.* at 468-469.

³⁹⁹ Courts have dismissed several FTC’s claims because of lack of evidence of harm to competition (*See, e.g.*, *E.I. du Pont de Nemours & Co.* 729 F.2d 128, 141 (2d Cir.1984); *Boise Cascade Corp. V FTC*, 637 F.2d 573, 578-579 (9th Cir. 1980)

⁴⁰⁰ Administrative Complaint, Rambus Inc, N. 9302, F.T.C., ¶120 (June 18, 2002).

⁴⁰¹ *See, e.g.*, *Rambus Inc. v. F.T.C.*, 522 F.3d 456, 464 (D.C. Cir. 2008).

⁴⁰² *See, e.g.*, Administrative Complaint, Rambus Inc, N. 9302, 120, F.T.C. (June 18, 2002); *Dell Computer Corp.*, N. 3658, 9, F.T.C., (May 20, 1996).

One could nonetheless question whether a mere statement that the SEP owner's deception had an adverse effect on the success of the standard, or the standardization process would be sufficient to prove a violation of Section 5. In the *Boise Cascade* case, the Ninth Circuit maintained that the theoretical possibility of an anticompetitive effect could arise does not provide evidence that conduct actually harmed competition.⁴⁰³ It emphasized that a mere assertion of a possible—theoretical—anticompetitive effects is not sufficient to prove a Section 5 violation. This suggests that in order to bring a successful action under Section 5, the FTC would have to prove SEP owner's deception did actually delay the implementation of the standard or of the standardization process. This is likely to be impossible to show.

It remains also unclear whether Section 5 could apply to cases of unintentional failure to disclose a patent interest. The FTC suggested that Section 5 does not require evidence of intent.⁴⁰⁴ However, as explained in the section on the European Union, it is questionable whether the condemnation of an involuntary failure to disclose a patent is desirable from a policy perspective. Imposing a liability for an involuntary failure to disclose a patent might in fact deter companies from participating in SSOs' activities and contribute their technologies.⁴⁰⁵ As in the EU, it seems more desirable to focus the intervention of cases of intentional deception.

In sum, Section 5 of the FTCA could—in theory—address some deceptive practices that fall outside the domain of the Sherman Act. The reach of the provision remains however yet to be determined. Even if applied beyond the scope of the Sherman Act, it is evident that the provision would face some limitation. Most importantly, the FTC would still need to prove that the conduct had an adverse effect on competition, and as determined by the case law, a mere theoretical possibility that such effects could arise it is not sufficient. It is therefore questionable how many cases

403 *Boise Cascade Corp. v FTC.*, 637 F.2d 573, 579 (9th Cir. 1980).

404 *Rambus Inc. v. FTC.*, 9302, F.T.C., at 249 (Feb. 23, 2004) (Administrative Law Judge Decision) (“in order to establish liability for unfair methods of competition, specific intent need not be shown.”).

405 Several SSOs have accentuate the possibility of such effects when discussion the FTC intervention in the Dell case. Also Commissioner Azcuenaga maintained that “Several of the nation's most significant standards-setting organizations have written to state their opposition to the broad implications of the order and its possible chilling effect on the participation of firms with broad patent portfolios in the standards-setting process. VESA and a few other groups, however, support this or an even stronger order.”(*Id.* at 634).

that fall outside the domain of the Sherman Act would meet the elements of the Section 5 offence, if any.

3. LIMITATIONS IN ADDRESSING SEP OWNERS' DECEPTIVE CONDUCT

The SEP owner's deceptive conduct has triggered anticompetitive concerns both in the EU and in the United States. The analysis has nonetheless shown that EU competition law and U.S. antitrust laws have very different scopes in addressing the SEP owner's deceptive conduct. Surprisingly, the analysis unveils that the SEP owner is more likely to face antitrust liability under U.S. antitrust law. Section 2 of the Sherman Act in fact enables the plaintiff to capture the deceptive conduct of any participant of the standardization process, regardless of its initial level of market power, under the condition that the plaintiff shows an anticompetitive acquisition of monopoly power. However, the application of Article 102 TFEU is limited only to participants that have a dominant position at the time of deception, and does not reach the deceptive conduct of all those participants that are not dominant. Given that the majority of participants fall in the latter group, and are not dominant at the time of deception, Article 102 TFEU has a very limited scope in addressing deceptive practices that arise during the standardization process.

The divergent outcomes EU competition law and U.S. antitrust law reach in addressing the SEP owner's conduct do not reflect the application of different legal standards. Rather, they point out the basic differences between the two legal texts. Although the analyzed provisions address the undertaking's unilateral conduct, they ultimately embody different prohibitions. Section 2 of the Sherman Act prohibits undertakings to *obtain or maintain market power* in an anticompetitive manner. Article 102 TFEU is, on the other hand, less concerned about the way in which companies obtain their market power, but it focuses on the way in which, once obtain, this market power is used. Although this difference did not traditionally play a major role, it becomes particularly relevant in the standardization context. Therefore, in the standardization context, the differences between the prohibitions on unilateral conduct seems to emerge to their largest extent.

Further, the analysis has shown that an antitrust liability will not arise automatically even when the antitrust provisions apply. Even though Section 2 of the Sherman Act reaches the conduct of all participants of the standardization process, irrespectively of their initial level of market power, a liability would arise only in cases where evidence shows that the deception allowed the SEP owner to obtain or maintain market power. In the absence of such evidence, the deceptive conduct cannot be condemned under the Sherman Act. Therefore, difficulties in showing the causal link between the deceptive behavior and the acquisition of market power weaken also the force of the U.S. rules in addressing deceptive practices. Further, the analysis has also shown that Section 5 of the FTCA could perhaps apply to some conducts that remain outside of the scope of the Sherman Act, but the exact reach of the provision remains yet to be clarified. For now, the scope of Section 5 of the FTCA has in addressing SEP owner's deceptive conduct seems to coincide with the scope of Section 2 of the Sherman Act.

In light of such limitations, several commentators have argued for a more extensive application of the competition law provisions. In the US, commentators suggested that courts should adopt a less strict causation requirement when scrutinizing the SEP owner's behavior under Section 2 of the Sherman Act. In the EU, one could suggest to extend the application of Article 102 TFEU to non-dominant participants of the standardization process. Policy reasons nonetheless suggest that a more extensive reading of the antitrust provisions is not desirable. Although the departure from the existing legal doctrines is in some cases necessary and desirable, it represents a dangerous instrument that should be used with great caution. Extending the application of Article 102 TFEU to non-dominant undertakings might be a particularly risky step, given that it would confer to the Commission a great discretion when assessing the legality of the conduct of non-dominant undertakings. At the same time, an extensive reading of Article 102 TFEU would have a limited beneficial effect, given that other mechanisms, such as SSOs' rules, can adequately address the SEP owner's deceptive practices. Given the costs related to an extensive reading of Article 102 TFEU, and market ability to address those practice, there do not seem to be sufficient justifications to introduce such an important change in the enforcement of Article 102 TFEU.

Also in the United States, policy arguments support the maintenance of a strong causation requirement adopted so far by courts in scrutinizing the SEP owner's deceptive behavior. As it will be explained in the chapter on antitrust remedies, finding the SEP owner's deceptive behavior anticompetitive results in the imposition of antitrust remedies, with far reaching effects. The imposition of such remedies is justified only when there is evidence of anticompetitive effects. In the absence of such effects, however, antitrust remedies might not be appropriate, and it seems more desirable to leave the intervention to other bodies of law.

In sum, competition law has a role in addressing the SEP owner's deceptive conduct during the standardization process. This role is nonetheless limited to cases where the challenged conduct falls within the established antitrust doctrines. As a result, in both jurisdictions there will be cases of deception that will fall outside the domain of antitrust liability. This, however, does not necessarily imply that SEP owner's deceptive conducts will remain unpunished, since other mechanisms, such as the SSOs' internal rules can provide adequate remedies for the SEP owner's deceptive practices. Competition law is only one of the tools that stimulate the well-functioning of the standardization process. Antitrust enforcers should not aim to stretch the applicability of competition law to all deceptive conducts, but rather limit their antitrust intervention to cases where there is evidence of an anticompetitive effect. In the absence of such evidence other mechanisms, such as SSOs' rules, provide a more adequate tool to address the SEP owner's deceptive behavior.

STRATEGIC LICENSING PRACTICES

The present chapter focuses on the second group of opportunistic practices: the strategic use of SEPs after their implementation into a standard. The chapter analyzes the applicability of Article 102 TFEU, Section 2 of the Sherman Act, and Section 5 of the FTCA to such practices, and identifies the circumstances in which the SEP owner can face antitrust liability under EU competition law or US antitrust law.

The analysis shows that also in this case, EU competition law and US antitrust law have different scopes in addressing the SEP owner's conduct. However, in contrast to cases concerning deceptive practices during the standardization process, the analysis unveils a more predictable result. A SEP owner faces a stricter liability standard under EU competition law, where Article 102 TFEU enables the Commission to address a wide spectrum of licensing practices. The US antitrust law provisions have, on the other hand, only a limited ability to address the SEP owner's strategic licensing practices.

The chapter is structured as follows. The first section reviews the licensing practices that might trigger antitrust concerns. Next, the chapter analyzes the applicability of the antitrust provisions to these licensing practices, and determines the circumstances in which a SEP owner might face antitrust liability under the two legal systems. The third section summarizes the results of the analysis and points out the limitations of competition law faces in addressing the SEP owner's imposition of strategic licensing conditions.

1. TYPES OF STRATEGIC LICENSING PRACTICES

Once a patented technology becomes essential for the standard, the SEP owner becomes an unavoidable trading party for all manufacturers of standard compliant goods. The SEP owner gains the role of a gatekeeper, controlling not only the access to the SEP, but also the access to the entire standard. The position the SEP owner obtains after the implementation of its patented technology in a standard might thus open the door for opportunistic licensing practices.

First, the SEP owner might refuse to license its SEP to a manufacturer. By doing so, the SEP owner may exclude the manufacturer from the market of standard compliant goods, and, when compliance with the standard is *de facto* or *de jure* mandatory, from the entire product market. The SEP owner might have the incentive to do so if it competes in the product market, and it is thus interested in foreclosing its competitors from the downstream market.

Second, the SEP owner might use its strong position to hold up a manufacturer, by imposing on it *exploitative* licensing conditions.⁴⁰⁶ The SEP owner might impose the payment of licensing fees which are considered excessive to the value of the SEP, or impose others onerous licensing conditions, such as mandatory cross-license of non-essential patents, non-assertion clauses, and compulsory grant back. Particularly when compliance with the standard is *de facto* or *de jure* mandatory, manufacturers might have no other option than accept the onerous licensing conditions demanded by the SEP owner.

Third, the SEP owner might also impose licensing conditions that not only exploit the manufacturer, but also harm manufacturer's ability to compete. For example, the SEP owner might impose licensing conditions that raise manufacturer's production costs, and in this way harm its ability to compete in the product market. Alternatively, the SEP owner might impose other onerous licensing conditions that harm the manufacturer's ability to compete. In *Apple v Samsung*, for example, Apple alleged that Samsung had used its SEPs as a tool to coerce Apple to cross-license, or at least tolerate, Samsung's use of Apple's design patents.⁴⁰⁷ This would allow Samsung to free-ride on the Apple's innovation, and thus deprive Apple from the competitive advantage it enjoys in the product market thanks to its design related IPRs.

Therefore, the implementation of the patented technology in the standard might enable the SEP owner to engage in licensing practice that have exclusionary effects, exploitative effects, and/or might harm rivals' ability to compete. Several commentators have emphasized that the SEP owner's opportunistic licensing practices

406 C. Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 282 AMERICAN LAW AND ECONOMICS REVIEW 12 (2010).

407 Apple Inc. v. Samsung Electronics Inc., WL 3205801 (July 21, 2011).

might have also broader negative implications.⁴⁰⁸ They suggested that cases of patent holdup might affect negatively consumers, if the high royalties are passed on them in the form of higher prices of standard compliant goods.⁴⁰⁹ An indirect harm may also arise if the SEP owner's behavior affects the success of the standard, undermines confidence in the standardization process, decreases the incentives of undertaking to participate in the standardization activities, and thus deprives consumers from the benefit of standardization activities.⁴¹⁰ In other words, SEP owners' strategic licensing practices might not only have a detrimental effect on the manufacturer of standard compliant goods, but also on consumers more in general.

The next section will review the applicability of the competition law provisions to the described licensing practices and evaluate under which circumstances the SEP owner might face antitrust liability under EU competition law or US antitrust law.

2. THE ANTITRUST LIABILITY

2.1. *Refusal to license a SEP*

A refusal to license allows the SEP owner to exclude the manufacturer from the market of standard compliant goods, and in some circumstances, from the entire product market. A SEP owner that owns a patent essential for the 3G standard, and itself competes in the market for mobile devices, may refuse to license its SEPs to a rival manufacturer of mobile devices, and in this way foreclose a downstream

408 See, e.g., R. M. Davis, *Failed Attempts to Dwarf the Patent Trolls: Permanent Injunctions in Patent Infringement Cases Under the Proposed Patent Reform Act of 2005 and eBay v. Mercexchange*, 17 CORNELL JOURNAL OF LAW AND PUBLIC POLICY 431, 438 (2008); U.S. Dept. of Justice & U.S. Patent & Trademark Office, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments* (2013).

409 See, e.g., Press Release, Antitrust: Commission Consults on Commitments Offered by Samsung Electronics Regarding Use of Standard Essential Patents, IP/13/971 (Oct. 17, 2013) ("cause harm to consumers by increasing prices, reducing product choice and stifling differentiating innovation in the markets for smartphones and tablets.").

410 See, e.g., Motorola Mobility LLC and Google Inc., Complaint, File No. 121-0120, F.T.C. (2013); F. M. Scott-Morton, Deputy Assistant Attorney General For Economic Analysis, *The Role of Standards in the Current Patent Wars* (2012), Presented at Charles River Associates Annual Brussels Conference available at <http://www.justice.gov/atr/public/speeches/289708.pdf>; J. F. Wayland, *Oversight of the Impact on Competition of Exclusion Orders to Enforce Standards-Essential Patents* (2012), available at <http://www.justice.gov/atr/public/testimony/284982.pdf>.

competitor from the market. Cases concerning a refusal to license a SEP thus raise similar concerns as the ones arising in relation to “essential facilities”.

There is so far no precedent determining whether a SEP owner’s refusal to license a SEP constitutes anticompetitive conduct under EU competition law. Cases where the SEP owner unilaterally and unconditionally refuses to license its SEPs are rare in practice. It is nonetheless possible to speculate that a SEP owner’s refusal to license could constitute an anticompetitive behavior under EU law. When evaluating the applicability of Article 102 TFEU, it is important to keep in mind that a refusal to license a SEP takes place at the time when the patented technology has been implemented in the standard, and the SEP owner has (presumably) obtained a dominant position.⁴¹¹ Therefore, the SEP owner needs to respect the prohibitions of Article 102 TFEU. As explained in chapter III, though patent owners, including dominant ones, are in principle free to select their licensees, such right is not unqualified, and in exceptional circumstances, a refusal to license can constitute an abuse of a dominant position. When the elements of the exceptional circumstances test are met (the access to the IPR is indispensable, a refusal to license excludes effective competition, prevents the emergence of new products, and it is not objectively justified), a refusal to license a SEP can constitute an abuse of dominant position in violation of Article 102 TFEU.⁴¹²

Although the ECJ and the Commission did not discuss the presence of exceptional circumstances in any of the investigations against SEP owner, it is possible to foresee several instances where the SEP owner’s refusal would meet these elements. Consider the example of a SEP implemented in the GSM standard, back in the days, a *de facto* requirement for the participation in the EU market for mobile devices. First, the access to a SEP meets the requirement of indispensability. Given that compliance with the GSM standard was a *de facto* requirement for the participation in the EU market for mobile devices, the access to the standard, and

411 For discussion on SEP owner’s market power see Chapter V: [THE SEP OWNER’S MARKET POWER](#).

412 For the doctrine of exceptional circumstances see: Joined cases C-241/91 P and C-242/91 P Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities, ECR, Pag. I-00743 (1995); Case C-418/01 IMS Health GmbH & Co. OHG v NDC Health GmbH & Co., I-05039, 48 (2004); See also discussion in Chapter III: [2.2.A.1. The “exceptional circumstances” test under EU competition law](#).

consequently to the SEPs implemented the GSM, was indispensable for manufacturers of mobile devices entering the EU market. Second, by refusing to license its SEP, the SEP owner could exclude manufacturers from the EU market of mobile devices. Mobile devices that did not comply with the GSM standard could not interoperate with the large network of GSM devices, and were consequently not attractive for EU consumers. Third, a refusal to license the SEP could prevent manufacturers to offer new devices, for which there is potential demand. This element can be read narrowly, as requiring the manufacturer to offer a totally different product that does not exist in the market. The “new product” element can be read, however, also more broadly. In *Microsoft*, the ECJ maintained that the “new product” element should include all circumstances “where there is a limitation not only of production or markets, but also of technical development.”⁴¹³ This could be interpreted as capturing any case where the refusal to license the SEP prevents the manufacturer from releasing a product, (including products having only minor difference from the one already existing in the market), and through this hindering technical development.

The same analysis applies also to cases of a constructive refusal to license a SEP. A SEP owner that is not interested in licensing its SEP might make a fictitious offer to the manufacturers, but impose unreasonable licensing conditions that cannot be accepted by the manufacturer. Such practice has the same effect of a refusal to license and it is evaluated by applying the same legal doctrine.⁴¹⁴ Therefore, also a constructive refusal to license a SEP can constitute an anticompetitive conduct in violation of Article 102 TFEU.

It is worth noting that in principle, the SEP owner’s refusal to license its SEP might constitute an abusive behavior even if the SEP owner did not make a FRAND commitment. Outside the SEPs context, there are several cases in which the ECJ and the Commission considered abusive a refusal to license an IPR, although the owner never expressed its intention to license its IPR to other companies. In *Magill*, for example, the three broadcasting companies had previously not offered their respective

413 T-201/04 *Microsoft v. Commission*, ECR II-4463, ¶ 647 (2004).

414 Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, C 45/7, ¶ 79 (2009).

copyrighted materials to other entities.⁴¹⁵ Likewise, in the *IMS* case, the copyright owner did not express the intention to license its brick structure to competitors.⁴¹⁶ Although the decisions in these two cases were highly controversial, they clearly indicate that a refusal to license might constitute an abuse of a dominant position, even in absence of a previous agreement to license the IPR to other companies. Indeed, the fact that the SEP owner has voluntarily agreed to license its SEPs to other companies on FRAND terms might be taken into account by the competition authority when determining whether a refusal to license constitutes an abuse of a dominant position. A liability is more likely to arise when the SEP owner has committed to license its SEP on FRAND terms. However, the absence of a FRAND commitment does not preclude the application of Article 102 TFEU to the SEP owner's refusal to license.

The example of a technology essential for the GSM standard might be again helpful in explaining this point. Let us assume that X, the SEP owner, did not participate in the standardization process, and did not commit to license its SEP on FRAND terms, but its technology was nonetheless implemented in the GSM standard. Due to the wide adoption of the GSM standard, X obtained a dominant position. If X decides to license its SEPs to the majority of licensees, but refuses to do so to a specific licensee, the Commission could challenge X's conduct under Article 102 TFEU. If the elements of the exceptional circumstance test are met, X's refusal to license its SEP could be still considered abusive, although X is not bound by a FRAND commitment. Although such situations might be rare in practice, it is evident that the absence of a FRAND commitment does not preclude the SEP owner's antitrust liability under Article 102 TFEU.

It is possible, on the other hand, that, despite the existence of a FRAND commitment, the SEP owner's refusal to license does *not* meet the criteria of the exceptional circumstances test. The access to the SEP might not be indispensable, because of the availability of alternative, although less attractive, standards. As emphasized by the ECJ in the *Oscar Bronner case*, if alternatives exist, although less attractive, the access to the input cannot be considered indispensable, and a refusal to

⁴¹⁵ Case T-69/89 *Radio Telefis Eireann v Commission of the European Communities*, ECR II-485, at 73-74 (1995).

⁴¹⁶ Case C-418/01 *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co.*, I-05039.

grant access is not abusive.⁴¹⁷ In such circumstances, the SEP owner's refusal to license should not trigger a liability under Article 102 TFEU.

In practice, however, it is unlikely that the Commission or the ECJ would find a SEP owner dominant, but nonetheless consider the input *not* indispensable. As pointed out by Rousseva, the evaluation of indispensability often focuses on the very same criteria as the one taken into account when evaluating the undertaking's market power.⁴¹⁸ It is consequently unlikely that once the SEP owner has been found dominant, the refusal to license will not meet the elements of the exceptional circumstances test.⁴¹⁹

In sum, the established principles of EU competition law clearly show that SEP owner's refusal to license its SEPs might constitute an abuse of a dominant position

417 The case concerned a dispute between Oscar Bronner, the publisher and distributor of the daily newspaper *Der Standard*, and Mediaprint Zeitungs, the publisher of two daily newspapers. Mediaprint established a nationwide home-delivery scheme for the distribution of its newspapers. It however refused to grant access to the scheme to Oscar Bronner, who requested to include *Der Standard* in Mediaprint's home-delivery service in exchange for a reasonable remuneration. Oscar Bronner brought an action against Mediaprint, maintaining that the refusal constituted an abuse of a dominant position. The ECJ however rejected Oscar Bronner complaint. It noted that other methods of distributing daily newspapers existed, although less advantageous: the access to Mediaprint's scheme was thus not indispensable to compete in the market. It thus concluded that Mediaprint's refusal was not in violation of Article 102 TFEU (Case C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co. KG*, ECR I-07791, at 145 (1998)).

418 Rousseva points out that Commission and the ECJ have often inferred the indispensability of an input from the undertakings' dominant position. They have generally take into account the same factors when evaluating the indispensability element, and the dominant position. In proving her statement, she points out several examples. In the *Magill* case, for instance, the ECJ determined that the TV program listening constituted a relevant market, and considered indispensable for competition in the market of televisions guides. When discussing the indispensability element the CFI maintained that there was "no actual or potential substitute for a weekly television guide offering information on the programs for the week ahead". Rousseva maintains that through such statement the ECJ "de facto equated indispensability with the test for substitutability applied in defining the relevant market." She further points out that in the *Oscar Bronner* case the ECJ addressed separately the issue of dominance and indispensability. When referring to the national court it nonetheless suggested to take into account the same factors when defining the relevant market, and when evaluating the indispensability of the input. The connection between the two evaluations is even more evident in the *IMS* case, where the ECJ determined that it is possible to identify a hypothetical market where "the products or services are indispensable in order to carry on a particular business, and where there is an actual demand for them on the part of undertakings which seek to carry on the business for which they are indispensable." As maintained by Rousseva, this clearly indicates that there is no distinction between the condition for indispensability and the demand-side substitutability used in defining relevant markets. See: EKATERINA R. ROUSSSEVA, *THE APPLICATION OF ARTICLE 82 EC TO EXCLUSIONARY ABUSES: EVOLUTION OR REVOLUTION*, European University Institute (2008).

419 In theory, however, such outcome could be possible. The court clarified that the access to an input should be considered indispensable when there are no actual or potential substitutes for it. (Case C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co. KG*, ECR I-07791, at 41 (1998)). Even if a company has a dominant position in the market, it does not necessarily imply that substitutes do not exist.

and lead to a liability under Article 102 TFEU. A relevant question is how the European Commission and the ECJ will apply the exceptional circumstances test. If the Commission and the ECJ adopt wide interpretation of the concepts of “essentiality” and “new product” criteria, SEP owners would face strict constraints under Article 102 TFEU. This could lead to a situation where every refusal to license a SEP is considered anticompetitive, even if the circumstances of the specific cases are not truly exceptional.

The analysis of the antitrust liability follows a different path under US antitrust law. Also in this case there is no legal precedent evaluating the antitrust liability for the SEP owner’s refusal to license. As in the EU, US courts have recognized that the patent owners’ right to refuse to license is not absolute, and that in certain occasions a refusal to license can constitute an anticompetitive conduct in violation of Section 2 of the Sherman Act.⁴²⁰ However, US courts have been much more reluctant than their EU counterparts to find exceptions to the general rule. Particularly after *Trinko*, several scholars believe that it is highly unlikely that a US court will consider a unilateral refusal to license anticompetitive.⁴²¹

Nevertheless, the strong reluctance of US courts to find a refusal to license anticompetitive, does not necessarily preclude the SEP owner’s liability for refusing to license a FRAND-encumbered SEP. Hovenkamp points out that “[i]t is incorrect to conclude that antitrust does not apply because under the antitrust laws a firm is free to refuse to license its patents.”⁴²² He emphasizes that the case law did not determine that a refusal to license can *never* be illegal under Section 2 of the Sherman Act. Rather the contrary. In *Xerox*, the Court of Appeals for the Federal Circuit maintained that the patent owner cannot use the statutory right of a refusal to license to gain a

420 *In re Independent Service Organization Antitrust Litigation*, 203 F.3d. 1322, 1325 (Fed. Cir. 2000).

421 *See, e.g.*, 3B P. E. AREEDA & H. HOVENKAMP, *ANTITRUST LAW* ¶¶ 770–74 (3d ed. 2007) (“(T)he simple refusal to license is virtually never an antitrust violation”); U.S. D.O.J. & F.T.C., *ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION* 6 (2007) (“Antitrust liability for mere unilateral, unconditional refusals to license patents will not play a meaningful part in the interface between patent rights and antitrust protections.”). For a detailed discussion of a liability for a refusal to license see: Chapter III, [2.2.A.2. Limited liability under U.S. antitrust law](#).

422 H. J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 BOSTON COLLEGE LAW REVIEW 87, 105 (2007) (“One is the fact that a “mere” refusal to license is not an antitrust violation. The other is that compulsory licensing of patents is a common remedy for conduct that has been found to violate the antitrust laws.”).

monopoly in a market “beyond the scope of the patents.”⁴²³ Although it remains to be clarified when a refusal to license extends the monopoly power “beyond the one conferred by the patent”, it is evident that the SEP owner’s antitrust liability for a refusal to license cannot be completely excluded. Finding the SEP owner’s refusal to license a FRAND-encumbered patent anticompetitive also does not contradict the Supreme Court’s *Trinko* decision. The Court of Appeals for the Third Circuit pointed out that cases where the SEP owner has offered to license its SEPs on FRAND terms differ from *Trinko*, where the defendant would *not* cooperate with other undertakings absent a statutory duty to do so.⁴²⁴ By imposing a duty to license, antitrust law would not impose on the SEP owner any additional duty, but for the one the SEP owner voluntarily agreed to access. The reasoning of the Third Circuit suggests that, although antitrust law generally does not impose on a SEP owner a duty to cooperate with its licensees, once a SEP owner voluntarily enters in such collaboration (by making a FRAND commitment), a subsequent refusal to license could trigger the application of the Sherman Act.

Such conclusion is nonetheless highly speculative. Given the absence of precedents, it remains unclear whether courts would be willing to find a refusal to license a SEP anticompetitive. US courts have been much more reluctant than their EU counterparts to use antitrust as a tool to impose on undertakings a duty to deal with competitors. They might be similarly reluctant to impose such an obligation on SEP owners.

Further, even if one accepts that a refusal to license can amount to an act of monopolization (or attempted monopolization) in violation of Section 2 of the Sherman act, the legal standard for finding such practice anticompetitive is different from the standard applied under EU competition law. Whereas in the EU the evaluation focuses on the existence of exceptional circumstances, including the question whether the refusal to license prevents the emergence of a new product, the US analysis

423 In re Independent Service organizations Antitrust Litigation, 203 F. 3d 1322, 1327 (Fed. Cir. 2000). The Supreme Court adopted this approach already in *Singer*, by stating that “[t]he possession of a valid patent or patents does not give patentee any exemption from provisions of Sherman Act beyond limits of patent monopoly.” (*United States v. Singer*, 374 U.S. 174, 196 (1963). See also *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2243 (2013) (“antitrust law has no business prying into a patent settlement so long as that settlement confers to the patent holder no monopoly power beyond what the patent itself conferred.”).

424 *Broadcom Corp. v. Qualcomm Inc.*, 501 F. 3d 297, 316 (3rd policz 2007).

focuses on the extension of market power “beyond the scope of the patent”. The SEP owner’s refusal to license would be thus scrutinized under different legal standards in the two jurisdictions.

The difference between the two legal systems is even more evident in cases where the SEP owner did not agree to license its SEP on FRAND terms. In absence of a FRAND commitment, US courts are unlikely to consider a refusal to license anticompetitive. This can be inferred by reference to the two leading cases. In *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, the Supreme Court found that a company operating three of four mountain ski areas in Aspen violated Section 2 by refusing to continue its cooperation with the company that operated the fourth ski area.⁴²⁵ The Supreme Court maintained that the fact that Aspen Skiing was willing to unilaterally terminate a collaboration that lasted for several years suggested a willingness to forsake short-term profits to achieve an anticompetitive end. In *Trinko*, on the contrary, there was no voluntary collaboration, but only a duty to deal imposed by a statute. The Supreme Court emphasized that in absence of previous voluntary cooperation, antitrust law does not impose on undertakings a duty to deal with their rivals.⁴²⁶ This suggests that in absence of a voluntary agreement to license its SEP on FRAND terms, the SEP owner’s refusal to license does not constitute an anticompetitive conduct actionable under the Sherman Act.⁴²⁷

In both jurisdictions it remains also questionable which reasons, if any, could justify the SEP owner’s refusal to license its SEP. Both EU competition law and US antitrust law recognize that a patent owner might provide an objective justification for its refusal.⁴²⁸ Outside the context of SEPs, US courts recognized that when a patent owner has been sued by the potential licensee, the existence of such suit might provide a valid justification for the patent owner’s refusal to licensee.⁴²⁹ It seems however that

425 *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, (1985).

426 *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004).

427 A plaintiff could still try to bring an action against the SEP owner under the essential facility doctrine. As mentioned in Chapter III, however, the success of such action is highly unlikely, given that in the view of many authors, the Supreme Court decision in the *Trinko* case represents the ultimate rejection of the essential facility doctrine under US antitrust law. See chapter III: [2.2.A. Refusal to license](#).

428 See chapter III: [2.2.A. Refusal to license](#).

429 *House of Materials, Inc. v. Simplicity Pattern Co.*, 298 F.2d 867, 871 (2d Cir.1962); see also *Zoslaw v. MCA Distrib. Corp.*, 693 F.2d 870, 889-90 (9th Cir.1982) (“[T]he relationship between a manufacturer

this justification will not be accepted in the context of SEPs. Several SEP owners have been sued by their licensees for patent infringement; however, courts and competition authorities have not taken this aspect into account when evaluating SEP owner's licensing practice.⁴³⁰ Perhaps, the SEP owner can justify its refusal to license a SEP if it proves that the parties requesting the use of the SEP have refused (or are unable to pay) what has been determined to be a FRAND royalty. However, outside of this scenario, it seems questionable whether courts and competition authorities would accept any other justification for refusing to license its SEPs. The argument that licensing damages its incentives to carry out research and development would be undermined by his own expression of willingness to license on FRAND terms.

2.2. *Patent holdup*

The second group of strategic licensing practices includes cases where the SEP owner licenses its SEP, but demands the manufacturer to accept exploitative licensing terms. The SEP owner might holdup the manufacturer and impose on it licensing conditions that the manufacturer would not accept in an *ex ante* negotiation. Such licensing strategy has no exclusionary, but only an *exploitative* effect. Competition authorities on both sides of the Atlantic have expressed their strong concerns with the SEP owner's ability to impose exploitative licensing conditions and have often signaled their intention to address such practices through competition law.⁴³¹ Despite the high number of investigations, however, the limits competition law poses on the SEP owner

and its customer should be reasonably harmonious; and the bringing of a lawsuit by the customer may provide a sound business reason for the manufacturer to terminate their relations.")

430 See, e.g., Press Release, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents, IP/13/406 (May 6, 2013).

431 For the EU see: Press Release, J. Almunia, Industrial policy and Competition policy: *Quo vadis Europa?* (SPEECH/12/83), available at http://europa.eu/rapid/press-release_SPEECH-12-83_en.htm ("I am notably thinking of the surge in the strategic use of patents that confer market power to their holders . . . We must also ensure that, once they hold standard essential patents, companies give effective access on fair, reasonable and non-discriminatory terms . . . I am determined to use antitrust enforcement to prevent the misuse of patent rights to the detriment of a vigorous and accessible market."); For the US see: Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigation of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisition of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd., Depart. Of Justice (Feb. 13, 2012), available at http://www.justice.gov/atr/public/press_releases/2012/280190.pdf ("[The division] continues to monitor the use of SEPs in the wireless device industry, particularly in the smartphone and computer tablet markets. The division will not hesitate to take appropriate enforcement action to stop any anticompetitive use of SEP rights").

remain unsettled, given that most cases have been concluded without a formal determination of whether the challenged conduct constituted anticompetitive conduct.

Commentators initially focused their attention on the SEP owner's imposition of excessive royalties. Competition authorities were particularly concerned that by holding up manufacturers, a SEP owner would be able to impose licensing fees that are excessive to the value of the technology.⁴³² Later on, however, the attention focused on the SEP owner's use of the injunction as a tool to hold up manufacturers, and impose on them exploitative licensing conditions. Those licensing conditions did not necessarily refer to excessive royalties, but could include other onerous licensing terms, such as non-assertion clauses, broad cross-licensing agreements, or other licensing conditions that the manufacturer would not accept in absence of the threat of an injunction.⁴³³ The liability for the two types of practices will be discussed in the following paragraphs.

2.2.A. Excessive royalties

i. The EU approach

The European Commission has shown a clear intention to prosecute under Article 102 TFEU the SEP owner's imposition of excessive royalties. In the Rambus case, the Commission challenged the imposition of royalties that were considered excessive to the value of the SEPs. According to the Commission's preliminary view, Rambus had engaged in an intentional deceptive conduct during the standardization, by not disclosing the existence of patents essential for the standard (patent ambush), and subsequently abused its dominant position, by charging unreasonable royalties for the use of its SEPs.⁴³⁴ The Commission's preliminary view was that "without its 'patent ambush', Rambus would not have been able to charge the royalty rates it currently does."⁴³⁵ The Commission has thus clearly indicated the intention to address the SEP

⁴³² See, e.g., Press Release, Antitrust: Commission confirms sending a Statement of Objections to Rambus, MEMO/07/330 (Aug. 23, 2007).

⁴³³ See, e.g., Press Release, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents, IP/13/406 (May 6, 2013).

⁴³⁴ Press Release, Antitrust: Commission confirms sending a Statement of Objections to Rambus, MEMO/07/330 (Aug. 23, 2007).

⁴³⁵ *Id.*

owner's exploitative licensing practices made possible by a deceptive behavior during the standardization process.

The Commission addressed the imposition of exploitative licensing conditions also in the investigation initiated against Qualcomm. Qualcomm participated in the standardization process and committed to license its SEPs on FRAND terms. Later on, however, Qualcomm allegedly failed to comply with the FRAND commitment. When initiating the investigation, the European Commission maintained that it would evaluate whether Qualcomm's breach of the FRAND commitment constituted an abuse of its dominant position.⁴³⁶ It argued that "a finding of *exploitative* practices [...] contrary to Article [102] of the EC Treaty may depend on whether the licensing terms imposed by Qualcomm are in breach of its FRAND commitment."⁴³⁷ The approach adopted in the Qualcomm investigation suggest that imposing exploitative licensing terms subsequent to a false FRAND commitment might constitute an abuse of a dominant position.

In a later investigation the Commission signaled that a SEP owner's imposition of exploitative licensing practices might constitute an anticompetitive behavior, even if the SEP owner did *not* act deceptively during the standardization process. The Commission made this position clear in the investigation it brought against ICom.⁴³⁸ Robert Bosch GmbH (Bosch) participated in the standardization procedure of ETSI, and committed to license its patents on FRAND terms. Bosch however later sold its patent portfolio (including its SEPs) to ICom, an entity that did not participate in the standardization process and was consequently not bound by Bosch's FRAND commitment. The Commission expressed a concern that the transfer of the patent portfolio could result in patent holdup and signaled the intention to start an investigation, would ICom not comply with the FRAND commitment given by Bosch. The Commission emphasized that the unrestricted access to SEPs on FRAND terms safeguards the procompetitive economic effects of standard setting, and such effects could be eliminated if, as a result of a transfer of the SEP, the FRAND commitment

436 Press Release, Antitrust: Commission initiates formal proceedings against Qualcomm, MEMO/07/389 (2007).

437 *Id.* (emphasis added).

438 Press Release, Antitrust: Commission welcomes ICom's public FRAND declaration, MEMO/09/549, 2009.

would no longer apply.⁴³⁹ The Commission's intervention implicitly suggested that the new SEP owner should inherit the FRAND commitment from the previous SEP owner. Although one could question whether competition law was the appropriate tool to force the "transfer" of the FRAND commitment, the intervention against IPRCom clearly indicated the Commission's willingness to address SEP owners' exploitative licensing practices, even if not deceptive conduct is involved.

Despite the three initiated investigations, as of April 2014, the Commission has not adopted any infringement decision against a SEP owner for the imposition of exploitative licensing terms. The Rambus case was closed with a commitment decision, which imposed on Rambus a royalty cap, but did not determine whether the challenged conduct constituted an abuse of a dominant position.⁴⁴⁰ The IPRCom case ended with the SEP owner's assurance that it will license the SEPs on FRAND terms,⁴⁴¹ whereas the Commission closed the proceeding against Qualcomm, after the complainants withdrew their claims.⁴⁴²

A speculative analysis suggests, nonetheless, that the broad language of Article 102 TFEU would allow the Commission to address the SEP owner's exploitative licensing practices. Article 102 TFEU prohibits dominant undertakings to abuse their dominant position by engaging in both exclusionary and exploitative practices.⁴⁴³ Further, the ECJ clarified that an IPR does not guarantee to the owner the opportunity to demand the highest possible remuneration, but only the appropriate remuneration.⁴⁴⁴ Although the Commission has rarely addressed exploitative practices, it is worth noting that it has never given up its ability to prosecute those practices. Rather the contrary: the Commission emphasized that although its enforcement will generally focus on exclusionary practices, it intends to address

⁴³⁹ *Id.*

⁴⁴⁰ Press Release: Antitrust, Commission Accepts Commitments from Rambus Lowering Memory Chip Royalty Rates, MEMO/09/544 (2009).

⁴⁴¹ Press Release: Antitrust: Commission Welcomes IPRCom's Public FRAND Declaration, MEMO/09/549 (Dec. 10, 2009).

⁴⁴² Press Release: Antitrust: Commission Closes Formal Proceedings Against Qualcomm, MEMO/09/516 (Nov. 24, 2009).

⁴⁴³ Case 27/76 United Brands Company and United Brands Continentaal BV v Commission of the European Communities, ECR 207, ¶ 235 (1978); Hoffmann-La Roche & Co. AG v Commission, ECR 00207, ¶¶ 250-252 (1978); Case 26/75 General Motors Continental v Commission, ECR 1367, at 12 (1975).

⁴⁴⁴ Joined cases C-403/08 and C-429/08 Football Association Premier League Ltd and Others v QC Leisure and Others and Karen Murphy v Media Protection Services Ltd., at 108 (2011).

exploitative conducts in circumstances where the “proper functioning of the market cannot be otherwise adequately ensured”.⁴⁴⁵ As argued by some authors, such circumstances are aptly represented by cases concerning SEPs, where the presence of network effects and the length of the standardization process prevent the development of market mechanisms that would efficiently address the SEP owner’s exploitative practices.⁴⁴⁶

A liability under Article 102 TFEU could arise even when the SEP owner is not bound by the FRAND commitment. Article 102 TFEU imposes a general prohibition on dominant undertaking not to abuse a dominant position, irrespectively from the duties that arise for the dominant undertaking from a contractual agreement, such as a FRAND commitment. The absence of a FRAND commitment does not preclude the Commission intervention in cases where the SEP owner imposes exploitative licensing terms. Article 102 TFEU provides the legal basis to address exploitative practices even in absence of a FRAND commitment.

However, the fact that Article 102 TFEU provides the legal basis for an intervention does not necessarily imply that the antitrust intervention is desirable from a policy perspective. As in other areas, the intervention towards exploitative practices remains highly controversial.⁴⁴⁷ There are several reasons for it.

First, it is often difficult to identify an exploitative licensing practice. For example, it is difficult to define the line between legitimate, but high royalty, and a royalty that is abusive. So far, neither the ECJ nor the Commission has designed a clear test that would allow to identify unfair, excessive royalties. The definition adopted so far by the ECJ determines that a price should be considered excessive if it bears no “reasonable relation with the economic value of the good.”⁴⁴⁸ The European Commission, on the other hand, did suggest some benchmarks that could be applied in evaluating whether the licensing fee determined by the SEP owner is fair. In the *Guidelines on the Applicability of Article 101 TFEU to Horizontal Cooperation*

445 Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, C 45/7, ¶ 7 (2009).

446 M. Dolmans, The Concept of Abuse under Article 82 EC: Profit Sacrifice or Proportionality Test? US law and EU law compared, College of Europe, Bruges / Global Competition Law Centre (2005).

447 For a general discussion on the concern related to the antitrust intervention in exploitative practices see: Chapter III, [2.2.B. Excessive royalties](#).

448 Case 27/76 United Brands Company and United Brands Continentaal BV v Commission of the European Communities, ECR 207, ¶ 250 (1978).

Agreements, a document dealing *inter alia* with standardization agreements, the Commission suggested that in case of a dispute, the fairness of a royalty could be evaluated by comparing the fees charged *ex ante* (before the industry has been locked into the standard) to those charged *ex post* (after the industry is locked in),⁴⁴⁹ or to a fee announced in an *ex ante* statement.⁴⁵⁰ The suggested benchmarks might provide some help. They however do not provide a general test that would allow to clearly identify the exploitative licensing fees. In particular, they do not determine how the Commission should evaluate cases where the licensing fee is set *ex novo*,⁴⁵¹ and there is no valid benchmark that the Commission could use to evaluate the excessiveness of the royalty.

Second, the absence of a clear legal test has several negative implications for the antitrust intervention. On one hand, it leaves a substantial level of legal uncertainty for SEP owners, who do not have any reference to evaluate whether the royalty fee they demand is within the borders of legality. At the same time, the absence of a clear legal test opens the door for incorrect decisions.⁴⁵² The Commission might erroneously consider the royalties for the SEP excessive, although they are not. In this case, the Commission's intervention would illegitimately limit the SEP owner's compensation for its innovative effort, and consequently, it would affect in a negative way the SEP owner's willingness to engage further in the innovative process,⁴⁵³ and contribute its technologies to SSOs.⁴⁵⁴

The absence of a clear legal test might also favor the strategic use of antitrust claims by the manufacturers.⁴⁵⁵ Hovenkamp notes that "[d]efendants in intellectual

449 EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 289 (2010).

450 *Id.*

451 Latin expression meaning "from the beginning", "new". In contradiction with cases, where the SEP owner has previously determine a licensing fee, and it has later changed it.

452 For literature on false positives and false negatives *see, e.g.*, F. H. Easterbrook, *The Limits of Antitrust*, 63 TEXAS LAW REVIEW 1 (1984).

453 *See, e.g.*, D. Geradin, V. Denicolò, A. Layne-Farrar, and A. J. Padilla, *Revisiting Injunctive Relief: Interpreting eBay In High-Tech Industries With Non-Practicing Patent Holders*, 4 JOURNAL OF COMPETITION LAW & ECONOMICS 571(2008).

454 *See, e.g.*, G. Sidak, *The Meaning of FRAND, Part I: Royalties* (May 2013), 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931 (2013).

455 For general literature on the strategic use of antitrust claims in the field of patent litigations *see*: Easterbrook, *The Limits of Antitrust*, 63 TEXAS LAW REVIEW 1, 15 (1984). ("Antitrust counterclaims are a common reply to contract or patent litigation precisely because they greatly raise costs"). *See also* M. D. JANIS, H. HOVENKAMP, M. A. LEMLEY, AND C. R. LESLIE, IP AND ANTITRUST; AN ANALYSIS OF

property cases cast about for some weapon with which to strike back at the plaintiff: an antitrust claim allows the intellectual property defendant to regain the offensive.”⁴⁵⁶ A manufacturer might use a claim of an anticompetitive conduct as a tool to obtain bargaining power in the negotiation of the licensing terms. A SEP owner that is facing a potential antitrust liability, including the possibility of a high fine and private damage claims, might be more willing to agree on a lower royalty.

Third, even if the competition authority does not address the SEP owner’s imposition of excessive royalties, the manufacturer will generally have other legal mechanisms through which challenge the SEP owner’s exploitative licensing practices. If the manufacturer does not agree with the licensing conditions demanded by the SEP owner, it will be able to challenge them in court, by demanding the court to determine whether the demand licensing conditions comply with the FRAND commitment. The legal basis for bringing those disputes is not antitrust, but rather contract law—more precisely, the FRAND agreement. Therefore, the fact that the SEP owner’s exploitative conduct will not be challenged under competition law does not necessarily imply that the conduct will not be challenged through other legal tools.

One could argue that despite the existence of alternative mechanisms, the European Commission should address the SEP owner’s exploitative licensing practices, given that such practices are harmful for consumer. The SEP owner’s imposition of excessive royalties can impose a direct harm on consumer, if excessive royalties are passed on to consumers in the form of higher prices of standard compliant goods. Further, an indirect harm may arise, if the SEP owner’s imposition of exploitative licensing conditions undermines the success of the standard, diminishes the confidence in the standardization process, and thus deprives consumers from the benefits brought by the standardization. This theory of harm is certainly valid, and support the necessity for an antitrust intervention. However, part of the economic theory has criticized the patent holdup conjecture.⁴⁵⁷ They emphasized that not only

ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW, § 1B (Aspen Publishing 2009). (“Defendants in intellectual property cases cast about for some weapon with which to strike back at the plaintiff; an antitrust claim allows the intellectual property defendant to regain the offensive”).

⁴⁵⁶ M. D. JANIS, H. HOVENKAMP, M. A. LEMLEY, AND C. R. LESLIE, IP AND ANTITRUST; AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW, §11.1, (2011 Supp.) (Aspen Publishing 2009).

⁴⁵⁷ See, e.g., J. D. Wright, Commissioner, Fed. Trade Comm’n, Remarks at The Inaugural Academic Conference: The Commercial Function of Patents in Today’s Innovation Economy, George Mason

will patent holdup rarely arise in practice, but also that there is little evidence that it had any negative effect on the product market or on the standardization process. Given the divergent position of the economic theory, it seems desirable that, if the Commission decides to intervene in cases concerning the SEP owner's imposition of excessive royalties, it limits the intervention to cases where evidence shows that the SEP owner's conduct had an actual harmful effect on the product market, on the success of the standard, or on the standardization process.

In sum, although there is no doubt that Article 102 TFEU provides a legal basis for the European Commission's intervention towards SEP owner's exploitative licensing practices, it is less clear whether the intervention is desirable from a policy perspective. The risk of erroneous decisions, the consequent negative effects on innovation and the standardization process, coupled with the manufacturers' ability to challenge the exploitative licensing practices through other legal means weight against intervention. Although this does not suggest that the imposition of unfair royalties could never be anticompetitive, it seems desirable to limit the antitrust intervention to cases where the SEP owner's exploitative licensing conditions had a clear, and identifiable, harmful effect on consumers. In absence of evidences of such harm, it is desirable to solve the dispute over FRAND terms through other legal means, and forego the antitrust intervention. There is otherwise the risk that the Commission will become a body for the solution of disputes concerning the level of licensing fees (and the distribution of income between the SEP owner and the manufacturer), rather than a body for the protection of competition.

ii. The US approach

The SEP owner's imposition of excessive royalties triggers a different evaluation under US antitrust law. In contrast with Article 102 TFEU, the Sherman Act does not condemn exploitative licensing practices. Section 2 of the Sherman Act prohibits the undertaking to willfully acquire or maintain monopoly power on some basis other than merit.⁴⁵⁸ However, a SEP owner that has lawfully obtained its market power can

University School of Law (Sep. 12, 2013), at 22; G. Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931 (2013); Geradin & Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 2 EUR. COMPETITION J. 101, 153 (2007).

⁴⁵⁸ *LePage's Inc. v. 3M*, 324 F.3d 141, 147 (3d Cir. 2003).

charge any price the market can bear, without fearing antitrust liability under Section 2 of the Sherman Act.

The SEP owner's imposition of exploitative licensing conditions does not constitute anticompetitive conduct even if such exploitation was possible because of the SEP owner's deceptive conduct. The D.C. Circuit made this point clear in *Rambus*, where it clarified that deceptive conduct during the standardization process may constitute a violation of Section 2 if it allows the SEP owner to unlawfully acquire market power. If it however only allows the SEP owner to charge higher prices, the conduct falls outside the domain of the Sherman Act.⁴⁵⁹

Liability could perhaps arise if the SEP owner imposes licensing conditions that allow it to monopolize the downstream market, or there is at least dangerous probability of such effect. In such case, the SEP owner's licensing practice would require a different legal evaluation and could constitute an anticompetitive conduct actionable under Section 2 of the Sherman Act. However, actions brought against SEP owners generally do not include references to a possible exclusionary effect of the SEP owner's licensing strategy.⁴⁶⁰

Section 5 of the FTCA also has limited applicability in addressing the SEP owner's imposition of exploitative licensing conditions. In the *N-Data* case, the FTC challenged the imposition of excessive prices as a Section 5 standalone violation.⁴⁶¹ The National Semiconductor Corporation (National) participated in the standardization procedure of the Institute of Electrical and Electronics Engineers (IEEE) and offered to license its technology for a one-time fee of \$1,000. Later on, National sold its SEPs to Vertical Networks which sold them further to N-Data. At the time of the licensing stipulation, N-Data refused to license its SEPs for \$1,000 offered by the original SEP owner and demanded manufacturers to pay a higher royalty. The FTC brought an action against N-Data, maintaining that its conduct constituted an act of unfair competition. The FTC acknowledged that N-Data's conduct did not constitute an act of monopolization, it however maintained that the conduct fell squarely within the parameters of the *DuPont* case, often considered the case which

⁴⁵⁹ *Rambus Incorporated v. F.T.C.*, 522 F. 3d 456, 464-466 (D.C. Circuit, 2008).

⁴⁶⁰ *See, e.g., id.* (where the FTC challenged Rambus' imposition of excessive royalties, but did not suggest that such pricing strategy would have an exclusionary effect).

⁴⁶¹ Complaint, Negotiated Data Solutions LLC, File No. 0510094, F.T.C. (Jan. 23, 2008).

established the principles of the Section 5 standalone violation.⁴⁶² The FTC maintained that N-Data's conduct was both oppressive and coercive, given that it attempted to exploit the manufacturers locked into the use of the standard.⁴⁶³ The FTC also maintained that there was little doubt that N-Data's conduct was harmful to consumers, which could be harmed directly, if they had to pay higher prices, but also indirectly, if the manufacturers became less willing to participate in standardization activities.⁴⁶⁴ It thus suggested that the conduct was a standalone violation of Section 5 of the FTCA.

The decision to challenge the N-data's conduct as a Section 5 standalone offence was not uncontroversial. The dissenting opinion of Commissioner Majoras emphasized that the FTC failed to clearly state the elements of the Section 5 standalone offence.⁴⁶⁵ The FTC did not provide a clear test that would allow SEP owners to determine whether the imposed licensing conditions are within the border of legality, or they could constitute an act of unfair competition. Finally, the dissent also pointed out that the FTC did not prove that N-Data's conduct had any anticompetitive purpose, nor that it lacked a valid business justification. Commissioner Majoras noted that the decision to increase the level of royalties could have been motivated by a legitimate business reason.⁴⁶⁶ She further explained that even if N-Data's conduct was motivated by a desire to strike a better royalty compensation, this "alone should not be considered a competition-related offense."⁴⁶⁷

N-Data was concluded with a consent order, in which N-Data agreed not to enforce its SEPs unless it has first offered a license based on the terms offered by the original SEP owner.⁴⁶⁸ There was hence no determination as to whether the

462 The Court of Appeals of the 2nd Cir. maintained that "[B]efore a business conduct . . . may be labeled 'unfair' within the meaning of § 5 a minimum standard demands that . . . at least some indicia of oppressiveness must exist . . . such as (1) evidence of anticompetitive intent or purpose on the part of the producer charged, or (2) the absence of an independent legitimate business reason for its conduct (E.I. du Pont de Nemours & Co. v Federal Trade Commission, 729 F.2d 128, 139-140 (, 2nd Cir. 1984)).

463 Statement of the Federal Trade Commission, Negotiated Data Solutions LLC, Docket No. 051 0094, F.T.C., at 1-2 (Jan. 23, 2008) (footnote 5).

464 *Id* at page 2.

465 Dissenting Statement of Chairman Majoras In the Matter of Negotiated Data Solutions LLC, File No. 0510094, F.T.C. (Jan. 23, 2008).

466 *Id*.

467 *Id*.

468 Negotiated Data Solutions LLC, FTC Docket No. C-4234., F.T.C. (Sept. 22, 2008).

challenged conduct violated Section 5 of the FTCA. As a result, it remains questionable whether the FTC's action would be successful if challenged in court.

It seems however unlikely that in the future the FTC would bring similar cases under Section 5 of the FTCA. In the *N-Data* case, the FTC's concerns were very similar to the one expressed by the European Commission in the *IPCom* case: the FTC was particularly concerned that the N-Data-type conduct could allow participants of the standardization process to bypass the SSOs' rules on FRAND commitments, by simply transferring their SEPs to a new entity.⁴⁶⁹ However, such conduct is unlikely to arise in future, given that most SSOs have implemented rules concerning the transferability of a FRAND commitment. In other words, the N-Data scenario is unlikely to arise in future cases. Secondly, it seems unlikely that the FTC would challenge under Section 5 of the FTCA the SEP owner's imposition of excessive royalties. US courts and competition authorities have been traditionally reluctant to intervene in cases where the antitrust intervention would require them to determine the access terms, and thus act as price regulator.⁴⁷⁰ It is unlikely that a different approach would be adopted when dealing the SEP owner's licensing practices.

In sum, both Section 2 of the Sherman Act and Section 5 of the FTCA have a very limited applicability in addressing the SEP owner's imposition of exploitative licensing conditions. As a result, cases of patent holdup will generally fall outside the domain of US antitrust law.

2.2.B. The SEP owner's request for an injunction

One of the most controversial issues in the debate concerning SEPs is the SEP owner's request for an injunction against infringers. Competition authorities on both sides of the Atlantic have expressed strong concerns with such practices, emphasizing that requesting an injunction against an infringer of FRAND-encumbered patents

469 Statement of the Federal Trade Commission, Negotiated Data Solutions LLC, File No. 051-0094, F.T.C., at 1.

470 The Supreme court emphasized this point in *Trinko*, where it suggested that "[a] problem should be deemed irremedia[ble] by antitrust law when [it] requires the court to assume the day-to-day controls characteristic of a regulatory agency" (*Verizon Communications Inc. v. Law Offices of Curtis v. Trinko, LLP*, 540 US 398, 415 (2004)).

could facilitate holdup.⁴⁷¹ In the competition authorities' view, the threat of being forced to pull the products out of the market—and suffer as a result a substantial financial loss—could force the infringer to accept onerous licensing conditions. The SEP owner's request for an injunction could distort the licensing negotiation and enable the SEP owner to extract opportunistic licensing terms.

i. The EU approach

The European Commission has clearly shown the intention to address the SEP owner's request for an injunction through Article 102 TFEU. The Commission addressed the SEP owner's request for an injunction first in the investigation initiated against Motorola Mobility (Motorola), the owner of several SEPs for the 2G and 3G standards.⁴⁷² The Commission explained that although seeking or enforcing an injunction is not in itself anticompetitive, it might in specific circumstances have anticompetitive effects and thus amount to an abuse of a dominant position. The Commission added that this would be the case when the SEP owner uses the threat of an injunction towards a *willing* licensee, that is, a licensee that is willing to accept FRAND licensing terms.

The Commission was particularly concerned that Motorola used the threat of an injunction as a tool to force willing manufacturers of mobile devices—in particular Apple—to accept onerous licensing conditions for the use of SEPs. More specifically, the Commission was concerned that Motorola used the threat of an injunction as a tool to impose on Apple the agreement to not challenge the validity of Motorola's SEPs.⁴⁷³ The Commission maintained that Apple showed its willingness to accept FRAND licensing terms in particular by “accept[ing] to be bound by a German court's determination of a FRAND royalty rate.”⁴⁷⁴ It added that “[t]he acceptance of binding third party determination for the terms of a FRAND licence . . . is a clear indication that a potential licensee is willing to enter into a FRAND licence.” The Commission

⁴⁷¹ See, e.g., Press Release, Antitrust: Commission Opens Proceedings Against Motorola, IP/12/345 (Mar. 4, 2012); Complaint, Motorola Mobility LLC, and Google Inc., File No. 121 0120, F.T.C. (Jan 3, 2013); Complaint, Robert Bosch GmbH, Docket No. C-4377, F.T.C. (Nov 26, 2012).

⁴⁷² Press Release, Antitrust: Commission opens proceedings against Motorola, IP/12/345 (Mar. 4, 2012).

⁴⁷³ *Id.*

⁴⁷⁴ Press Release, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents-Questions and Answers, MEMO/13/403 (May 6, 2013).

explained that “the fact that the potential licensee challenges the validity, essentiality or infringement of the SEP does not make it unwilling where it otherwise agrees to be bound by the determination of FRAND terms by a third party.”⁴⁷⁵ Motorola allegedly tried to obtain licensing clauses that prohibited Apple to challenge the validity of Motorola’s SEPs, even after Apple had agreed to be bound by a third party determination of the FRAND terms. In the Commission’s preliminary view, such conduct constituted an abuse of a dominant position in violation of Article 102 TFEU.⁴⁷⁶

The Commission adopted a similar approach in the investigation it brought against Samsung, the owner of several 3G UMTS SEPs.⁴⁷⁷ Also in this case the Commission emphasized that seeking an injunction against a *willing* license amounts to an abuse of a dominant position in violation of Article 102 TFEU. The Commission was particularly concerned that Samsung was using the injunction as a tool to force manufacturers—in particular Apple—to agree on broad cross-licensing terms, which the manufacturer would not accept in absence of the threat of having its products excluded from the market.⁴⁷⁸ The Commission maintained that, based on its preliminary assessment, Apple was willing to enter into a licensing agreement on FRAND terms. Nevertheless, Samsung started judicial proceedings seeking injunctions against Apple. The Commission maintained that, based on its preliminary view, Samsung’s behavior amounted to an abuse of a dominant market position.⁴⁷⁹

In October 2013, Samsung offered to the Commission to abstain from seeking injunctions for a period of five years against any manufacturer that agrees to a particular licensing framework for Samsung’s SEPs.⁴⁸⁰ Joaquín Almunia, the Vice President of the European Commission Responsible for Competition Policy, nonetheless announced that the market test revealed that Samsung’s commitments were not sufficient to address the anticompetitive concerns and that the Commission “will take account of the feedback [received from markets participants] when we

⁴⁷⁵ *Id.*

⁴⁷⁶ *Id.*

⁴⁷⁷ Press Release, Antitrust: Commission Sends Statement of Objections to Samsung on Potential Misuse of Mobile Phone Standard-Essential Patents, IP/12/1448 (Dec. 12, 2012).

⁴⁷⁸ *Id.*

⁴⁷⁹ *Id.*

⁴⁸⁰ Press Release, Antitrust: Commission Consults on Commitments Offered by Samsung Electronics Regarding Use of Standard Essential Patents, IP/13/971 (Oct. 17, 2013)

discuss with Samsung possible improvements to their commitments.”⁴⁸¹ As a result, the Commission did not accept the commitments initially offered by Samsung. The Commission nonetheless continued its talks with Samsung and it finally accepted Samsung’s commitments in April 2014.⁴⁸² As part of the commitment decision, Samsung agreed to not seek injunctions for a period of five years against infringers “who sign up to a specified licensing framework”⁴⁸³ The framework provides that any dispute over what constitutes a FRAND royalty should be determined by a court, or if both parties agree, by an arbitrator.⁴⁸⁴ The licensing framework consists of (1) a negotiation of the licensing terms for a period of up to 12 months, and (2) if no agreement is reached, a third party determination of FRAND terms by a court if either party chooses, or by an arbitrator if both parties agree on this.⁴⁸⁵

In April 2014, the Commission also adopted a decision against Motorola. Although as Samsung, Motorola was also negotiating with the Commission a possible commitment decision, the investigation ultimately resulted in an *infringement* decision. The Commission determined that by seeking and enforcing an injunction against Apple in front of a German court, Motorola abused its dominant position in violation of Article 102 TFEU.⁴⁸⁶ The Commission ordered Motorola to “eliminate the negative effects resulting from [its conduct].”⁴⁸⁷ It decided, however, to not to impose a fine on Motorola, since “there is no case-law by the European Union Courts dealing with the legality under Article 102 TFEU of SEP-based injunctions and that national courts have so far reached diverging conclusions on this question.”⁴⁸⁸

The European Commission’s decision in *Motorola* represents the first case in which a competition authority found a SEP holder’s request (and enforcement) of an injunction anticompetitive. As of April 2014, it remains unclear whether Motorola will appeal the decision. Given the absence of a financial fine, it is possible that Motorola

481 Joaquín Almunia, Vice President of the European Commission Responsible for Competition Policy, Intellectual Property and Competition Policy, IP Summit 2013, Paris (Dec. 12, 2013).

482 Press Release, Antitrust: Commission Accepts Legally Binding Commitments by Samsung Electronics on Standard Essential Patent Injunctions, IP/14/490 (Apr. 29, 2014).

483 *Id.*

484 *Id.*

485 *Id.*

486 Press Release, Antitrust: Commission Finds That Motorola Mobility Infringed EU Competition Rules by Misusing Standard Essential Patents, IP/14/489 (Apr. 29, 2014).

487 *Id.*

488 *Id.*

will *not* appeal the decision. One could nonetheless question, whether the Commission would be able to present valid case, if the decision was challenged in front of the ECJ.

Antitrust doctrines developed in past cases suggest that SEP owner's request for injunctive relief cannot automatically constitute an abuse of a dominant position. In *ITT Promedia v. Commission*, the ECJ noted that access to courts is a fundamental right and a general principle guaranteeing the rule of law. It explained that a legal proceeding, such as the request for injunctive relief, can constitute an abusive behavior "only in wholly exceptional circumstances."⁴⁸⁹ The Commission added that such exceptional circumstance would arise if the initiation of the legal proceeding is not legally founded.⁴⁹⁰ However, not every SEP owner's request for injunctive relief is legally unfounded. The Commission itself noted that there are circumstances in which the SEP owner can legitimately request the court to issue an injunction against an infringer of a FRAND-encumbered patent,⁴⁹¹ for example, when the manufacturer refuses to pay a FRAND licensing fee. In order to prove that the SEP owner's request for an injunction is anticompetitive, the Commission would thus have to show first that such request is not legally founded.

While the Commission confirmed that only an injunction against a willing manufacturer triggers anticompetitive concerns, it did not provide a definition of "willingness." Several questions remain open. Can the manufacturer refuse an offer made by the SEP owner and be still considered willing? Can the manufacturer refuse to negotiate the licensing terms? Does the manufacturer that is already using the SEPs have any duty towards the SEP owner?

Those questions have not been answered by the ECJ or the European Commission. They have been nonetheless partially addressed by EU national courts, mainly in Germany and the Netherlands. Although the discussion of the approaches adopted by the national courts falls outside the domain of this book, it is worth noting that courts have adopted different positions in determining the steps that the licensee needs to take in order to be considered "willing," and thus protected from the SEP

489 Case T-111/96, *ITT Promedia NV v. Comm'n*, E.C.R. II-02937, at 55 & 60 (1998).

490 *See, e.g., id* at 55-56 (maintaining that in order to be considered anticompetitive the legal action must manifestly unfounded.).

491 Press Release, Antitrust: Commission Sends Statement of Objections to Motorola Mobility on Potential Misuse of Mobile Phone Standard-Essential Patents, IP/13/406 (May 6, 2013) (maintaining that the use of injunction might be justified against an unwilling licensee).

owner's request of an injunction.⁴⁹² German courts seems to have been more willing to grant SEP owners injunctions against implementers than courts in other jurisdiction. Although they recognized that the manufacturer might be able to avoid an injunction, they required the manufacturer to take some active steps during the negotiation process. The so called Orange book standard applied in Germany determines that that manufacturer can avoid an injunction only if (1) it makes an unconditional licensing offer that the SEP owner cannot reject, and (2) behaves as if the offer has been accepted. This requires the manufacturer that is already using the SEP to pay the corresponding licensing fee to the SEP owner. In other words, the manufacturer cannot avoid an injunction by simply stating that the offered licensing terms are not FRAND.

In April 2013, the Düsseldorf court referred a question to the ECJ, asking the court to provide more guidance in evaluating the legitimacy of the SEP owner's request for an injunction.⁴⁹³ When addressing the dispute between *Huawei v. ZTE*, the Düsseldorf court noted that there are contradicting standards applied at the national and EU level when allowing the SEP owner to request an injunction. In particular, the so called Orange book standard applied Germany, seems to be nonetheless in contradiction to the informal approach adopted by the European Commission when addressing the SEP owner's request for injunction. In short, the referred questioned asked the ECJ to confirm the Orange book standard. As of April 2014, the ECJ has not addressed the question yet and none of the approaches has been (yet) recognized at the EU level.

Further, even if the Commission finds that the SEP owner's request for injunctive relief was not legally founded, this should not be sufficient to prove that the conduct is anticompetitive. A bad act cannot constitute an abusive behavior simply

492 See H. Ullrich, Patents and standards - a comment on the German Federal Supreme Court decision Orange Book Standard, *International Review of Intellectual Property and Competition Law* (2010) (discussing the approach adopted in Germany); G. Kuipers, D. Groenevelt and O. Lamme, A different perspective on *Samsung v. Apple* (De Brauw Blackstone Westbroek ed., 2011) (discussing the approach adopted in Netherlands).

493 Vorabentscheidungsersuchen des Landgerichts Düsseldorf (Deutschland) eingereicht am 5. Apr. 2013, *Huawei Technologies Co. Ltd gegen ZTE Corp., ZTE Deutschland GmbH*, Rechtssache C-170/13, *translated in* Request for a Preliminary Ruling from the Landgericht Düsseldorf (Germany) lodged on Apr. 5, 2013, *Huawei v. ZTE*, Case C-170/13, *available at* <http://curia.europa.eu/juris/document/document.jsf?text=&docid=139489&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=42242>.

because undertaken by a dominant company. As the ECJ explained in *AstraZeneca*, the dominant undertaking's misconduct must have an anticompetitive effect in order to constitute an abuse of a dominant position.⁴⁹⁴ Therefore, to show that the SEP holder's request an enforcement of an injunction constitutes an abuse of a dominant position, the Commission would have to prove that such conduct imposes anticompetitive effects on the market.

The Commission suggested that the SEP owner's request for an injunction might have an anticompetitive effect, if it unduly distorts the licensing negotiation, and forces the manufacturer to accept *exploitative* licensing terms. This could have a negative effect on the manufacturer's ability to compete in the downstream market, at the detriment of consumers. The Commission has thus adequately stated the potential anticompetitive effects that the SEP owner's use of an injunction might have on the market. Also in this case, however, there is a considerable disagreement in the economic theory concerning the effects the SEP owner's request for an injunction might have on the market. Although some commentators suggest that the use of injunctions fosters the risk of patent holdup, others have criticized this position. They suggested that courts are well equipped to reject to issue of an injunction if the circumstances of the case suggest that use of the remedy is not desirable.⁴⁹⁵ In their view, there is consequently little possibility that the mere threat of an injunction could allow the SEP owner to hold up a manufacturer. Further, one could question whether the Motorola's requirement not challenge the validity of its SEPs could truly have anticompetitive effect. Although it is true that consumers should not have to pay for invalid or non-infringed patents, consumers might benefit from the companies agreements that avoid costly litigation. Antitrust has traditionally not prohibited calculates, and there seems be no valid reason to adopt a different approach in the context of SEPs.⁴⁹⁶

494 Compare: Case C-457/10 P *AstraZeneca AB and AstraZeneca plc v European Commission*, ECR Pag 00000, 99 (2012) (maintaining that a mere deceptive behavior, even if undertaken by a dominant company, does not constitute an abuse of a dominant position if it has no anticompetitive effects).

495 P. Camesasca, G. Langus, D. Neven & P. Treacy, *Injunctions for Standard-Essential Patents: Justice Is Not Blind*, 9 J. COMPETITION L. & ECON. 285 (2013).

496 See, e.g., Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements, C 89 57 (2014) ¶ 176 ("In sectors where large numbers of intellectual property rights exist and where individual products may infringe upon a number of existing and future property rights, license agreements whereby the parties agree not to

In sum, the SEP owner's request for an injunction might constitute an abuse of a dominant position, however, such liability is far from automatic. To show that the SEP holder's request for an injunction is anticompetitive, the Commission would have to show that the request for an injunction was both legally unfounded and that such request had anticompetitive effects.

ii. The U.S. approach

The SEP owner's use of injunctions was similarly scrutinized through the provisions of US antitrust law. The FTC first challenged the SEP owner's use of an injunction in the Bosch case, concerning a merger between Robert Bosch GmbH (Bosch) and SPX Service Solutions (SPX).⁴⁹⁷ While evaluating the merger between the two companies, the FTC raised the issue regarding Bosch's SEPs. More specifically, the FTC addressed the use of injunctions against infringers of Bosch's SEPs. Both Bosch and SPX are active in the market for air-conditioning recovery, recycling, and recharging systems ("ACRRR") for motor vehicles, generally produced in compliance with a specific industry standard. SPX, the owner of several SEPs relevant for this standard, sued several competing manufacturers for infringing its SEPs and sought against them injunctive relief. Following the commencement of the suits, the SSO demanded SPX to commit to grant its SEPs on FRAND terms. SPX agreed; it nevertheless did not stop its initiated prosecutions against some of the manufacturers. The FTC brought an action against Bosch, maintaining that by seeking an injunction, SPX breached its FRAND commitment. In the view of the FTC, the injunction would have excluded its willing competitors from the market, and it would have caused, or threatened to cause, harm to competition. The FTC also maintained the conduct, if left unchecked, would tend to undermine the vitality of the standard-setting process.⁴⁹⁸ It thus maintained that the SPX's request for an injunction amounted to a violation of Section 5 of the FTCA.

The FTC also challenged the SEP owner's use of an injunction in the investigation initiated against Motorola Mobility/Google.⁴⁹⁹ As the Commission's

assert their property rights against each other are often pro-competitive because they allow the parties to develop their respective technologies without the risk of subsequent infringement claims.").

497 Robert Bosch GmbH, Docket No. C-4377, F.T.C. (Nov 26, 2012).

498 *Id.* at ¶ 19-20.

499 Complaint, Motorola Mobility LLC, and Google Inc., File No. 121 0120, F.T.C. (Jan 3, 2013).

investigation in the EU, the FTC challenged Motorola's use of injunctions against manufacturers that violated Motorola's SEPs. The FTC alleged that Motorola used the threat of the injunction as a tool to force some manufacturers to accept non-FRAND terms, and in this way, engaged in an unfair method of competition in violation of Section 5 of the FTCA.⁵⁰⁰

The FTC's decision to challenge the SEP owner's request for an injunction as a Section 5 standalone offence was not uncontroversial. First, with respect to the Robert Bosch's investigation, one could question whether it was appropriate to raise the question of the use of an injunction within a merger review. Next, the dissenting Commissioners, Ohlhausen and Rosch, emphasized that the FTC failed to state the elements of the Section 5 standalone offence.⁵⁰¹ In other words, although the FTC recognized that the challenged conduct did not meet the elements of the monopolization or attempted monopolization offence, it did not clarify what elements were taken into account when concluding that the SEP owner's use of an injunction amounted to a Section 5 standalone offence.

The two complaints were finally concluded with consent orders, in which Bosch and Motorola agreed to withdraw their claims for injunctive relief for FRAND-encumbered SEPs against willing licensees.⁵⁰² The consent agreements might have helped to address the concerns raised by the FTC, but they did not clarify the scope of Section 5 of the FTCA. Therefore, also under US antitrust law none of the cases has determined whether, and under which conditions, the SEP owner's request for an injunction could constitute an act of unfair competition under Section 5 of the FTCA. As the European Commission, the FTC also held that a SEP owner should be able to use an injunction against an unwilling licensee.⁵⁰³ The FTC (like the EU) failed to provide a definition of a willing licensee. Even if one accepts that the SEP owner's

⁵⁰⁰ *Id.* at ¶ 3.

⁵⁰¹ Dissenting Statement of Commissioner Maureen K. Ohlhausen, Motorola Mobility LLC and Google Inc., File No. 121-0120 (Jan. 3, 2013). Separate Statement of Commissioner J. Thomas Rosch Regarding Google's Standard Essential Patent Enforcement Practices, In the Matter of Google Inc., File No. 121-0120, at 3, F.T.C. (Jan. 3, 2013)); Statement Of The Federal Trade Commission, Robert Bosch GmbH, File Number 121-0081, at 3, F.T.C. (Jan. 3, 2013).

⁵⁰² Decision and Order, Robert Bosch GmbH, 1210081, F.T.C. (Apr. 24, 2013); Decision and Order, Motorola Mobility LLC, and Google Inc., 1210120, F.T.C. (July 24, 2013).

⁵⁰³ *See, e.g.*, Statement of the Federal Trade Commission, Motorola Mobility LLC and Google Inc., File No. 121-0120, at 4 (footnote 14) (Jan. 3, 2013) ("We agree that injunctions may issue in certain situations even when a RAND-encumbered SEP is involved, such as when a licensee is unwilling to license on FRAND terms.").

request for an injunction might constitute a Section 5 standalone offence, it remains far from clear when the use of an injunction is illegitimate.

The FTC might face an additional constraint when challenging the SEP owner's request for an injunction as a Section 5 violation, that is not present under EU competition law. Past cases suggest that it might be difficult for the FTC to prove that the SEP owner's request for an injunction is unfair unless explicitly prohibited by the SSO's rules.⁵⁰⁴ The *Rambus* case provides a clear explanation of this point. In bringing its action against Rambus, the FTC maintained that Rambus' failure to disclose its patent interest during the standardization process was unfair, because—although not in violation of the exact words of the SSO's rule—it was in violation of its “spirit”. The ALJ however refused to consider Rambus' conduct unfair, maintaining that in absence of a duty to disclose its patent interest, Rambus had a legitimate business justification not to disclose its patent interest. In absence of a duty to disclose the relevant patent interest, the failure to disclose its patent interest could not be considered unfair.⁵⁰⁵ This position was later confirmed also by the Court of Appeals for the D.C. Circuit, which criticized the FTC decision to consider Rambus' conduct unfair, although not in violation of the SSO's rules.⁵⁰⁶ Courts could adopt a similar approach in the SEP context. They could consider that the SEP owner has a legitimate reason to the use an injunction against infringers, unless such practice is explicitly prohibited by the SSO's rules.

Further, even when the FTC shows that the use of the injunction is not legitimate, proving a violation of the FTCA would require evidence of an anticompetitive effect.⁵⁰⁷ The FTC did list several anticompetitive effect. It suggested that, by keeping some of the goods out of the market, the injunction (if granted) might deprive consumers of the access to goods they are willing to buy, and diminishes the

⁵⁰⁴ Cases addressed outside the SEP context suggest that in order to prove a standalone violation of Section 5 of the FTCA, the FTC needs to first prove the existence of an unfair conduct (*Sperry & Hutchinson Co. v FTC*, 432 F.2d 146, 149-150 (5th. Cir., 1970)).

⁵⁰⁵ The FTC appealed the ALJ's decision. It however further relied solely on the monopolization claim, dropping the Section 5 standalone allegation. The Court of Appeals for the D.C. Circuit nevertheless presented its opinion on possible liability under Section 5. The Court expressed serious concerns with the FTC's decision to consider Rambus' conduct as deceptive and misleading, despite the fact that the SSO's policy did not impose on participants a clear duty concerning the disclosure of their patent interest (*Rambus Inc. v. FTC*, 522 F.3d 456, 462 (D. C. Cir. 2008)).

⁵⁰⁶ *Id.* at 468-469.

⁵⁰⁷ *F.T.C. v. Indiana Federation of Dentists*, 476 U.S. 447, 456 (1986) (the Supreme Court evaluated whether a conspiracy among dentists to refuse to submit X-rays to dental insurers harmed competition).

competition in the product market.⁵⁰⁸ The use of the injunction may allow the SEP owner to hold up manufacturers and force them to pay excessive licensing fees that go beyond the value of the SEPs.⁵⁰⁹ This might in turn harm consumers if higher prices are passed on to them.⁵¹⁰ The FTC also suggested that the use of an injunction might impose an indirect harm on consumers if it hinders the manufacturers' incentives to develop standard compliant products, and undermines the vitality of the standard-setting process.⁵¹¹ However, a mere statement that the use of an injunction would have such effects will generally not be sufficient to prove a violation, but the FTC would have to prove that such effects have actually arisen in practice.⁵¹²

In sum, Section 5 of the FTCA might allow the FTC to challenge the SEP owner's use of injunction against infringers of FRAND encumbered patents. The FTC has also shown the intention to address those practices as a standalone violation. For now, however, the exact reach of the provisions remains yet to be defined. It seems, nevertheless, that even if applied outside the borders of the Sherman Act, Section 5 of the FTCA would still have a narrower scope than Article 102 TFEU. In particular, the FTC might have to meet a stricter burden of proof when showing the anticompetitive effects of the SEP owner's request for an injunction, and might face stricter limitations when challenging the conduct of a SEP owner that does not compete in the downstream market.

2.3. Licensing practices that harm rivals' ability to compete

2.3.A. The EU approach

So far, I have discussed licensing practices that have either exclusionary or exploitative effects on the market. The SEP owner might impose, nonetheless, also

508 Analysis Of Proposed Consent Order To Aid Public Comment, Motorola Mobility LLC and Google Inc., File No. 121-0120, F.T.C. (Jan. 3, 2013).

509 Statement of the Federal Trade Commission, Robert Bosch GmbH, File Number 121-0081, F.T.C. (Nov. 26, 2012) ("By threatening to exclude standard-compliant products from the marketplace, a SEP holder can demand and realize royalty payments that reflect the investments firms make to develop and implement the standard, rather than the economic value of the technology itself").

510 Analysis Of Proposed Consent Order To Aid Public Comment, Motorola Mobility LLC and Google Inc, File No. 121-0120, F.T.C., at 6 (Jan. 3, 2013).

511 *Id.*

512 *Boise Cascade Corp. v FTC.*, 637 F.2d 573, 579 (9th Cir. 1980).

licensing conditions that not merely exploit the manufacturer, but also harm its ability to compete (without however excluding it from the market). I will call this licensing practice as practices that harm rivals' ability to compete. For example, the SEP owner can harm rival's ability to compete by imposing licensing condition that increase the manufacturer's production costs. The risk of such practice has been pointed out in *Research in Motion v. Motorola*.⁵¹³ Motorola, a manufacturer of mobile devices, but also the owner of several SEPs, allegedly licensed its SEPs under non-FRAND terms to other manufacturers of mobile devices, among which was Research in Motion (RIM). RIM brought an action against Motorola, maintaining that Motorola's licensing practices would raise the prices for all mobile devices, except for its own. RIM argued that the increased cost would harm the rivals' ability to compete in the market for mobile devices.⁵¹⁴

The SEP owner might also impose non-price related licensing conditions that harm the manufacturer's ability to compete. Apple for example accused Samsung of having engaged in "a relentless campaign of illegal and abusive assertions of its declared-essential patents to try to coerce Apple into tolerating Samsung's continuing imitation of the distinctive designs and patented features that are hallmarks of Apple's iPhone and iPad products."⁵¹⁵ Such practice could deprive Apple of the competitive advantage it has in the market by virtue of its IPRs.

The described licensing practices do not impose an imminent risk of exclusion. They might nonetheless harm the manufacturers' ability to compete in that market. So far, competition authorities and courts have devoted relatively little attention to those type of practices. Perhaps, this can be partly attributed to the fact that past cases often concerned SEP owners that were not active in the downstream market, and had consequently no interest in harming the manufacturers' ability to compete.⁵¹⁶

⁵¹³ *Research in Motion Limited v. Motorola Inc.*, 644 F. Supp. 2d 788, (Dist. Court, ND Texas, 2008).

⁵¹⁴ Google expressed concerns with a similar practice in the complaint it submitted to the European Commission in 2012. Google maintained that two companies, Nokia and Microsoft, transferred 1,200 patents, some of which SEPs, to a patent assertion entity Mosaid Technologies Inc.. Google alleged that the two companies colluded to create a patent troll—referring to Mosaid—that would then license its SEPs in way to raise the costs of mobile devices for competitors (Press Release, Google files European Commission complaint, claims Microsoft and Nokia are "colluding" (Jun. 1, 2012), *available at* <http://9to5google.com/2012/06/01/google-files-european-commission-complaint-claims-microsoft-and-nokia-are-colluding/>).

⁵¹⁵ *Apple v. Samsung*, Civil Action No. 11-CV-01846-LHK, at 1 (N.D. Cal, Sep. 22, 2011).

⁵¹⁶ For example, both Rambus and IPcom were companies not active in the downstream market.

However, these incentives might have changed in light of the recent patent acquisitions concerning SEPs, where the SEP owner often directly or indirectly competes in the downstream market.

Despite the limited number of precedents, doctrines developed outside of the standardization context suggest some general guidelines in addressing licensing practice that harm rivals' ability to compete. The SEP owner's imposition of such licensing conditions could constitute an abuse of a dominant position in violation of Article 102 TFEU. As other dominant undertakings, a dominant SEP owner has a special responsibility to abstain from any conduct that "impairs undistorted competition in the market".⁵¹⁷ The imposition of licensing conditions that illegitimately hinders manufacturers' ability to compete in the product market, and allows the SEP owner to obtain a competitive advantage, does not comply with the special responsibility and might constitute an abusive behavior.

Cases of margin squeeze might provide valid guidelines. A margin squeeze can occur where a firm is dominant in an upstream market and supplies a key input to an undertaking that competes with it in a downstream market. The dominant undertaking can charge its input at a price that affects the competitor's ability to compete in the downstream market, by squeezing its margins to insufficient levels.⁵¹⁸ The ECJ confirmed that the dominant undertaking's margin squeeze can violate Article 102 TFEU.⁵¹⁹ It explained that if "the spread does not allow a competitor which is as efficient as that undertaking to compete for the supply of those services to end users" the conduct constitutes an independent abuse of a dominant position.⁵²⁰ The ECJ also adopted a relatively low standard of proof. It explained that a margin squeeze might constitute an abuse of a dominant position even in the absence of evidence of exclusionary effects.⁵²¹ It clarified that "the fact that the desired result, namely the exclusion of those competitors, is not ultimately achieved does not alter its

⁵¹⁷ Case 322/81 *NV Nederlandsche Banden-Industrie Michelin NV v. Commission*, ECR 03461, ¶ 57 (1983); Joined Cases C 395/96 P and C 396/96 P *Compagnie maritime belge transports and Others v. Commission*, ECR I-01365, at 37 (2000); Case C-280/08 *Deutsche Telekom AG v. European Commission*, ECR I-09555, ¶ 83 (2010); Case C-52/09 *Konkurrensverket v. TeliaSonera Sverige AB*, ECR I-00527, ¶ 25 (2011).

⁵¹⁸ R. WHICH & D. BAILEY, *COMPETITION LAW*, 7th ed., at 754 (Oxford University Press 2012).

⁵¹⁹ See, e.g., Case T-271/03 *Deutsche Telekom AG v. Commission*, ECR II-477 (2008); Case C-52/09, ECR I-000 (2001); *Deutsche Telekom OJ* [2003] L 263/9.

⁵²⁰ Case C-52/09 *Konkurrensverket v. TeliaSonera Sverige*, ECR I-000 (2011), ¶¶ 30-32.

⁵²¹ *Id.* at 61 (citing *Deutsche Telekom v. Commission*, at 250 & 251).

categorization as abuse within the meaning of Article 102 TFEU.”⁵²² The ECJ added that the anticompetitive effect does “not necessarily have to be concrete, and it is sufficient to demonstrate that there is an anti-competitive effect which may potentially exclude [as efficient] competitors.”⁵²³ It concluded that it is sufficient to prove that competition is strongly weakened because of the dominant undertaking’s anticompetitive conduct.⁵²⁴

The doctrine developed in margin squeeze cases suggests that the SEP owner’s pricing strategy that harms rival’s ability to compete could constitute an abuse of a dominant position. This would be the case when the SEP owner charges a licensing fee for its SEPs that squeezes the profits of the “as efficient” manufacturer to insufficient level. Past cases also suggest that the Commission would have to meet a relatively low standard of proof. It would not have to show evidence of exclusion, but merely that the SEP owner’s licensing practice has “strongly weakened” competition in the market.

Several questions remain nonetheless open. In particular, it remains unclear whether the Commission and the ECJ would be willing to extend the margins squeeze doctrine to the SEP context, given that so far it has been applied mainly in the telecommunication sector, a regulated industry.

It is also questionable whether the Commission could condemn the SEP owner’s imposition on non-price based licensing conditions that harm rival’s ability to compete. For example, can the SEP owner face an antitrust liability for imposing an over-inclusive cross-licensing requirement that harm the manufacturer’s ability to compete? The Commission has certainly expressed concerns with such licensing practices. In the case it brought against Samsung, for example, the Commission maintained that it is concerned that by using the threat of an injunction Samsung was able to impose “licensing terms, such as broad cross-licenses, which a licensee would not agree to, absent the threat.”⁵²⁵ However, those cases fall outside the margin squeeze doctrine which focuses on a cost analysis. It is hence questionable where the Commission could challenge such practices under any existent competition law doctrine.

⁵²² *Id.* at 65.

⁵²³ *Id.* at 64.

⁵²⁴ *Id.* at 563.

⁵²⁵ Press Release, Antitrust: Commission Consults on Commitments Offered by Samsung Electronics Regarding Use of Standard Essential Patents, IP/13/971 (Oct. 17, 2013).

In sum, although the SEP owner's licensing practices that harm the manufacturer's ability to compete might be considered abusive, a liability is likely to arise only in cases that would fall under the margin squeeze doctrine. Other cases, particularly those that do not focus on a cost analysis, are unlikely to be considered anticompetitive.

2.3.B. The US approach

The legal analysis is again different under US antitrust law, where a SEP owner is less likely to face antitrust liability for the imposition of licensing conditions that harm the manufacturer's ability to compete. As maintained by the Supreme Court "even an act of pure malice by one business competitor against another does not, without more, state a claim under the federal antitrust laws", without proof of "a dangerous probability that [the defendant] would monopolize [the] market."⁵²⁶ Although the Supreme Court's decisions are not always consistent,⁵²⁷ today's approach suggests that in absence of a dangerous probability of market monopolization, the conduct will not be considered anticompetitive. Areeda and Hovenkamp noted that "when there is no realistic threat that the second market will become monopolized as a result of the defendant's activity, the statutory language [of Section 2 of the Sherman Act] simply does not apply."⁵²⁸ Therefore, a licensing practice that harms rivals' ability to compete, but has not prospect of monopolization, will be generally not considered anticompetitive under the Sherman Act.

⁵²⁶ *Brooke Group*, 509 U.S. 209 (1993). See also: *Levine v. Central Fla. Med. Affiliates, Inc.*, 72 F.3d 1538, 1555 (11th Cir.1996) ("To establish a violation of Section 2 for attempted monopolization, 'a plaintiff must show (1) an intent to bring about a monopoly and (2) a dangerous probability of success.'" (citing *Norton Tire Co. v. Tire Kingdom Co.*, 858 F.2d 1533, 1535 (11th Cir.1988)).

⁵²⁷ There are occasions in which the companies have been condemned for harming rivals' ability to compete that had no prospect of monopolization. In *United States v. Griffith*, for instance, the Supreme Court maintained that the use of monopoly power to gain a competitive advantage in a secondary market, through practices such as raising their costs, or making the rivals' offers less attractive, could violate Section 2, even if there is not dangerous probability to obtain a monopoly. *United States v. Griffith*, 334 U.S. 100, 107-109 (1948). ("The use of monopoly power, however lawfully acquired, to foreclose competition, to gain a competitive advantage, or to destroy a competitors, is unlawful". See also: *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 276. For discussion see: P. AREEDA & H. HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION*, Vol. 3, at 93, (2nd ed. Aspen Publ. 2002).

⁵²⁸ *Id.* at 89. See also: H. Hovenkamp, *The Federal Trade Commission and the Sherman Act*, 62 *FLORIDA LAW REVIEW* 1, 12 (2010) (maintaining that Section of the Sherman Act does not contemplate a monopoly leveraging claim).

US antitrust law has also adopted a very different approach towards margin squeeze cases than the one applied in the EU. In contrast to the ECJ, the Supreme Court held in *Pacific Bell v linkLine* that it does not recognize margin squeezes as a standalone form of anticompetitive conduct.⁵²⁹ The Supreme Court further emphasized that intervening in cases of margins squeeze might be particularly controversial because of the absence of clear antitrust rules.⁵³⁰ “[F]irms that seek to avoid price-squeeze liability will have no safe harbor for their pricing practices.”⁵³¹

Applying this reasoning to the context of SEPs suggests that the SEP owner’s licensing practice that increases rival’s cost, but does not allow an anticompetitive acquisition or maintenance of market power is not in violation of Section 2 of the Sherman Act.

Areeda and Hovenkamp nevertheless suggested that there are some exceptions to the general rule that conduct that has no prospect of monopolization falls outside the domain of Section 2. In their view, courts could apply Section 2 to conduct that harms rivals’ ability to compete, but nonetheless does not allow monopolization of the market, if the following elements are met: (1) the undertaking does business in the secondary market, (2) the target market is properly defined (referring to the market where competition is harmed), and (3) the conduct puts competitors in the secondary market in a competitive disadvantage by raising their costs or making their offerings less attractive. The test suggested by Areeda and Hovenkamp could be easily applied to the SEPs context, suggesting that Section 2 might capture also some SEP owner’s imposition of licensing terms that do not allow the monopolization of the market, but nevertheless harm rivals’ ability to compete, by increasing their production costs.

Given the lack of precedents, courts might be nevertheless reluctant to impose antitrust liability for a SEP owner’s licensing practices that do not have any prospect of monopolization. This was clearly shown in *RIM v Motorola*,⁵³² where RIM maintained that Motorola used its SEPs to increase rivals’ costs. RIM maintained that “Even if Motorola’s conduct does not eliminate competition entirely, it has the power

⁵²⁹ *Pacific Bell Telephone v linkline Comm’n.*, 129 S. Ct. 1109, 1119 (2009).

⁵³⁰ *Id.* at 1121.

⁵³¹ *Id.* at 1121.

⁵³² *Research in Motion Limited v. Motorola Inc.*, 644 F. Supp. 2d 788, (Dist. Court, ND Texas, 2008).

to harm it.”⁵³³ It added that if Motorola licenses only at exorbitant rates, it will force its competitors to increase prices in the downstream market in order to make a profit. This increases the prices for all products except for Motorola.⁵³⁴ The District court recognized that by increasing rivals’ cost, Motorola could affect the competition in the product market. However, it did not determine whether such conduct constitutes a violation of the Sherman Act. RIM ultimately won the case. The court nonetheless based its decision on a different theory of harm: it maintained that Motorola violated Section 2 by falsely committing to license its patents on FRAND terms, and thus monopolized the technology market.⁵³⁵ This supports the proposition that US courts might be reluctant to condemn under the Sherman Act licensing practices that merely harm rivals’ ability to compete, unless there is evidence that the conduct resulted in the monopolization of the market, or there is at least a dangerous probability of such effect. A similar conclusion can be drawn for cases where the SEP owner harms rival’s ability to compete by imposing non-price related licensing condition.

⁵³³ *Id.* at. 794.

⁵³⁴ *Id.*

⁵³⁵ *Id.* at. 796.

⁵³⁶ The District Court for the Western District of Wisconsin adopted a similar approach in the dispute between SanDisk and Kingston Technology Co., Inc. and Kingston Technology Corp. (hereafter Kingston) competitors in the market for USB flash memory drives. SanDisk owned several SEPs for the productions of USB flash memory drives. Anyone selling flash memory systems in the United States needed to obtain a SanDisk’s license. SanDisk offered to its potential licensees only a worldwide and non-exclusive cross-licenses for its full portfolio, and it did not license its patents individually, or vary the royalty rate according to the number of patents the licensee used. Kingston argued that SanDisk’s licensing practices forced licensees to pay higher royalties, thus increasing their costs and ultimately driving them out of the market. Kingston brought an action under Section 1, the provision of antitrust law prohibiting conspiracies, i.e. agreements, in restraint of trade (perhaps the plaintiff choose to relay of Section 1 rather than Section 2, because of the lower threshold to prove an antitrust liability). Kingston claimed that SanDisk’s licensing conditions restrained trade beyond the legal monopoly that patents extend to their holders. Because Kingston did not allege that SanDisk’s licensing agreements was *per se* unreasonable restraints, the court analyzed the licensing agreements under the "rule of reason", which requires "an inquiry into market power and market structure designed to assess a [restraint's] actual effect." The court however refused to find the practice anticompetitive. It recognized that the licensing practice can be anticompetitive. It however emphasized that the plaintiff needs to prove that (i) the licensing terms exceeded the scope of its patents and (ii) that the licenses have an anticompetitive effect. The Court however determined that Kingston failed to prove the anticompetitive effects of SankDisk practice. Kingston provided evidences that the number of aggregator and reseller firms operating in the USB flash memory drives market has fallen and several large firms have reduced their sales. The court found that it failed to prove that these changes would affect the competition in the market and increase prices or decrease output. Because the court found that the market actually remained competitive despite SanDisk’s conduct, it refused to find the conduct anticompetitive. (SanDisk Corp., v. Kingston Technology Co., Inc. and Kingston Technology Corp., No. 10-cv-243-bbc (Dist. Court, W.D. Wisconsin)).

Finally, it remains unclear whether SEP owner's licensing conditions that harm rivals' ability to compete could trigger liability as a Section 5 standalone violation. So far, the FTC has not scrutinized such licensing practices under Section 5 of the FTCA. The provision might nonetheless provide a valid tool to addressing those practices. Hovenkamp suggested that Section 5 seems well suited to address a case where the undertaking uses the monopoly power in one market to harm competition in a secondary market. He noted the ability to address those kinds of conduct might be particularly important in dominated networks. This might be aptly the case in the standardization context, where the SEP owner might dominate the technology market, and use such position to affect competition in the product market. In the future, the FTC might thus consider addressing SEP owner's licensing practices as a standalone violation of Section 5 of the FTCA. For now, however, the scope of the provision seems to coincide with that of the Sherman Act.

However, the FTC might face particularly strong limitations in challenging the SEP owner's practices that harm rivals' ability to compete in cases where the SEP is in the hands of an NPE. In the past, courts have refused to find a violation of Section 5 of the FTCA because the monopolist did not participate in the market where competition was affected, and therefore had no anticompetitive intent. In *Official Airline Guides, Inc. v. FTC*,⁵³⁷ the court refused to find the monopolist's conduct anticompetitive because the monopolist did not compete in the market where competition was allegedly affected. The case concerned the conduct of Official Airline Guides, Inc. (AOG), a monopolist in the publishing of flight schedules, which refused to provide information about commuter airlines' connecting flights, while providing connecting flight information for major carriers in its guide. The FTC maintained that the AOG's decision tended to lessen competition in the market for air transportation by harming the excluded carriers' ability to compete, and thus constituted an act of unfair competition. The court agreed that the publisher's conduct could be harmful. It nevertheless refused to find a violation of Section 5, given that the publisher did not compete in the air transport market and consequently did not have an interest in

⁵³⁷ *Official Airline Guides, Inc. v. F.T.C.*, 630 F. 2d 920 (2nd Cir. 1980).

harming competition in it.⁵³⁸ This suggests that it might be difficult for the FTC to apply Section 5 to an NPE, which does not compete in the market of standard compliant goods, and has no intent to harm competition in it.

In sum, EU competition law and US antitrust law are likely to lead to different results when scrutinizing the SEP owner's licensing practices that harm rivals' ability to compete. Liability is more likely to arise in the EU, where Article 102 TFEU enables the Commission to address the conduct of a dominant undertaking that only aims at harming rivals, without however excluding them from the market. The situation is different in the United States, where, in absence of any prospect of monopolization, the conduct falls outside the domain of US antitrust law.

3. THE LIMITATION IN ADDRESSING THE STRATEGIC USE OF SEPs

The analysis has shown that SEP owner's strategic licensing practices might impose several negative effects on the market. The SEP owner might exclude manufacturers from the product market, exploit them, or impose on them licensing conditions that harm manufacturers' ability to compete. The analysis also shows that neither jurisdiction has clearly defined the limits competition law poses on SEP owner's licensing practices. In other words, the exact limits competition law imposes on the SEP owner's licensing practices remain unclear.

Applying existing principles and precedents suggests that the application of EU competition law and U.S. antitrust law might lead to different outcomes in several circumstances. First, the SEP owner might face a different liability for refusing to license its SEP. The SEP owner's refusal to license might constitute an abuse of a dominant position in violation of Article 102 TFEU if the exceptional-circumstances requirement is met. A liability could arise under EU competition law even if the SEP owner has not committed to license its SEPs on FRAND terms. In the US, the outcome is less clear. Courts have been generally reluctant to consider a refusal to license anticompetitive, and a same patten might be adopted in the context of SEPs. However,

⁵³⁸ The Court was concerned that "enforcement of the FTC's order here would give the FTC too much power to substitute its own business judgment for that of the monopolist in any decision that arguably affects competition in another industry." *Id.* at. 927.

the analysis has shown that past doctrines do not necessarily exclude an antitrust liability for a refusal to license a FRAND-encumbered patent. Hence, a SEP owner's refusal to license might be considered anticompetitive also under US antitrust law, although such outcome is far less likely than in the EU.

The two legal systems differ also in their approach to the SEP owner's imposition of exploitative licensing conditions. A licensing practice that has mere exploitative effects does not constitute an anticompetitive conduct under the Sherman Act: it is not a harm that the antitrust law aims to prevent. Consequently, it is unlikely that the SEP owner would face a liability under Section 2 for imposing on the manufacturer exploitative licensing conditions. The FTC did challenge some exploitative licensing practices as a Section 5 standalone offense. In particular, it applied the provision to address the SEP owner's use of injunctions. Those investigations have been however concluded with consent decrees, without determining whether, and under which conditions, the imposition of exploitative licensing conditions could trigger a liability under Section 5 of the FTCA.

On the contrary, a SEP owner that imposes exploitative licensing terms on the manufacturer is more likely to face a liability under EU competition law, since Article 102 TFEU prohibits not only practices that have exclusionary effects but also those that result in a mere exploitation. However, the intervention towards exploitative practices remains controversial. Even under EU competition law, where Article 102 TFEU provides the legal basis to address a large spectrum of licensing practices, the desirability of such intervention remains questionable. The lack of a clear legal test that would allow the distinction between high, but legitimate licensing fees, and those that are exploitative, injects legal uncertainty regarding the intervention, opens the door for erroneous decisions, and favors the strategic use of anticompetitive claims. At the same time, the antitrust intervention towards exploitative practices might have little added value, since manufacturers that believe that the SEP owner has made them a non-FRAND offer are generally able to challenge the licensing offer in court, as part of a contract law dispute. Therefore, even if the intervention towards exploitative licensing practices is legally possible, from a policy perspective competition law may not be the most adequate tool to address those practices.

Finally, the competition law provisions have also a different scope in challenging the SEP owner's imposition of licensing practices that harm rivals' ability to compete. A SEP owner is more likely to face a liability under EU competition law, since a lower standard of proof is generally required to show a violation of Article 102 TFEU. A liability is, on the other hand, much less likely under US antitrust law. Unless a licensing practice is likely to result in monopolization of the market, or there is a dangerous probability of such effect, courts will be reluctant to find a conduct that merely harms the rivals' ability to compete (but has not exclusionary effect) in violation of the Sherman Act. The outcome could be perhaps different if the conduct is challenged as a Section 5 standalone violation, but the FTC has not yet applied the provision to address those types of practices.

The differences between EU competition law and US antitrust law in addressing the SEP owner's strategic licensing practices are not particularly surprising, given that similar divergences can be found outside the SEPs context. The divergent approach towards exclusionary practices is present also in other areas. Similarly, practices that harm to rivals' ability are generally able to trigger an antitrust liability under EU competition law, whereas they are not considered an antitrust violation in the US.

What is perhaps more interesting is that in both jurisdictions there is an increasing attention for exploitative licensing practices. For a long time, exploitative abuses have been considered as not being a relevant antitrust concern. The situation seems to be different in the context of SEPs, where both EU and U.S. competition authorities have shown their willingness to intervene. As explained, however, such intervention remains controversial.

INTERIM OBSERVATIONS: DIVERGENCES, LEGAL GAPS, AND LEGAL UNCERTAINTY

The analysis of the SEP owners' potential antitrust liability shows several important results. First, it is evident that SEP owners' opportunistic conduct might have anticompetitive effects. Both deceptive practices during the standardization process, as well as the strategic licensing practices might have adverse effects on competition. It is consequently clear that competition law can play a role in addressing the SEP owners' opportunistic conducts. The analysis however unveils that EU competition law and US antitrust law have *different* abilities to address the SEP owners' conduct. The different scope of EU competition law and US antitrust law in addressing the SEP owner's behavior is represented in Table 1.

TABLE 1: SEP OWNERS' LIABILITY UNDER ARTICLE 102 TFEU, SECTION 2 OF THE SHERMAN ACT, AND
SECTION 5 OF THE FTCA

SEP OWNERS' LIABILITY:	Article 102 TFEU	Section 2	Section 5
Patent ambush	only dominant	YES (if exclusionary)	≈
False FRAND	only dominant	YES (if exclusionary)	≈
Refusal to license	YES	YES*	≈
Patent holdup	YES	NO	NO*
Request for an injunction	YES*	NO	NO*
Harm to rivals' ability to compete	YES*	YES*	≈ *

(≈) = the liability coincides with Section 2

(*) = the result is merely speculative

On one hand, there are important divergences between the role competition law plays in addressing the SEP owner's deceptive practices during the standardization process. Article 102 TFEU applies only to the deceptive practice of a SEP owner that had a dominant position at the time of the deception. However, only a limited number of SEP owners fall in this group. The majority of the participants obtain strong market

power only at a later stage, after the implementation of their patented technology in the standard. Therefore, Article 102 TFEU has a very limited ability to address deceptive practices that arise during the standardization process. Section 2 of the Sherman act, on the contrary, is able to address the deceptive practices of all participants, regardless of their initial level of market power. When the deception allows the SEP owner to monopolize the technology market, or there is at least a dangerous probability of success, Section 2 of the Sherman Act applies. The plaintiff needs to prove, nonetheless, the causal link between the deceptive behavior and the acquisition of market power.

The competition law provisions of the two jurisdictions have also different scopes in addressing the SEP owner's imposition of strategic licensing conditions. In these cases, however, a SEP owner faces stricter constraints under EU competition law. After the implementation of a patented technology in the standard, the SEP owner has presumably obtained a dominant position, and it is consequently subject to the prohibition of Article 102 TFEU. The provision provides the Commission the legal basis to address a wide spectrum of licensing practices, ranging from exploitative to exclusionary ones, as well as those that harm rivals' ability to compete. Section 2 of the Sherman Act, on the contrary, imposes much narrower limitations on the SEP owner's licensing practices. A SEP owner is less likely to face an antitrust liability for refusing to license its SEPs subsequent to a FRAND commitment. Similarly, no liability will arise for cases where the SEP owner's strategic licensing practice results in a mere exploitation. Exploitative practices do not constitute an anticompetitive behavior under US antitrust law. Perhaps, a liability could arise for practices that harm rivals' ability to compete, although in these cases, Section 2 of the Sherman Act has a narrower application than Article 102 TFEU.

The analysis also shows that in none of the jurisdictions NPEs face a stricter antitrust liability than practicing entities. Although authors have suggested that their business structure might facilitate exploitative licensing practices, this aspect does not play a relevant role in the antitrust analysis. If anything, NPEs are less likely to face an antitrust liability, given that they will normally have fewer incentives to harm competition in the markets that are related to the standard.

Further, the analysis has shown that in none of the jurisdictions competition law provides a complete solution to the SEP owners' opportunistic conduct. Both legal

systems have gaps. In other words, in none of the systems competition law is able to fully address the concerns related to SEP owner's conduct.

The inability to address some licensing practices of the SEP owner under the Sherman Act seems to have stimulated plaintiffs to challenge the SEP owner's conduct under a different theory of harm. At least in the earlier cases, plaintiffs often accused SEP owners of having monopolized the technology market by acting deceptively during the standardization process, although their real concern was the SEP owner's imposition of exploitative licensing conditions. A good example is provided by the dispute between RIM and Motorola.⁵³⁹ As explained, Motorola initially licensed its SEPs to RIM. However, at the time of renegotiation, the two companies failed to reach an agreement. RIM brought an action against Motorola, maintaining that Motorola's refusal to offer a FRAND license harmed RIM's ability to compete.⁵⁴⁰ RIM nonetheless based its antitrust claim on the deception theory, suggesting that Motorola monopolized the *technology* market by falsely committing to license its technologies on FRAND terms during the standardization process. Although RIM was mainly concerned with the licensing terms for the use of Motorola's patents, it challenged Motorola for acting deceptively during the standardization process and monopolizing the technology market. The decision to do so was perhaps motivated by the fact that Section 2 of the Sherman Act has only a limited ability to address practices that harm rivals' ability to compete, whereas past cases have confirmed that a SEP owner might face an antitrust liability if it acts deceptively during the standardization process.⁵⁴¹

The limited scope of Section 2 of the Sherman Act has also stimulated the FTC to make a more aggressive use of the Section 5 of the FTCA. The FTC has in fact shown a strong intention to prosecute some SEP owner's licensing practices that would fall outside the domain of the Sherman Act as a Section 5 standalone offense.⁵⁴² The FTC

⁵³⁹ Research in Motion Limited v. Motorola Inc, 644 F.Supp.2d 788 (ND Texas 2008).

⁵⁴⁰ *Id.* at 794.

⁵⁴¹ A similar point was made by G. Ohana in the F.T.C. & D.O.J., Sherman Act Section 2 Joint Hearing/Understanding single-firm behavior: Misleading and deceptive conduct Session (2006) ("When we talk about deception, we really ought to be talking about exploitation and not deception.[...] The analytical weakness of just focusing on deception is that you are really missing what matters, which is not the deceptive act itself, but the exploitation of the market power that that creates.").

⁵⁴² Statement of the Federal Trade Commission, Motorola Mobility LLC and Google Inc. FTC File No. 121-0120, (2013) (While talking about the SEP owner ability to use injunctions as a tool to hold up manufacturers, the FTC stated "We take this action pursuant to the Commission's authority under

has in particular applied Section 5 of the FTCA to address the SEP owner's use of injunctions.⁵⁴³ All cases brought by the FTC were nonetheless concluded with consent orders, without thus determining the exact scope of Section 5 of the FTCA might have in addressing the SEP owner's licensing practices.

The analysis has also shows that the reason for the divergent results under EU competition law and under U.S. antitrust law does not reflect different views of the competition authorities. Rather the contrary. Competition authorities of the two jurisdictions have expressed very similar concerns in relation to the SEP owner's opportunistic practices.⁵⁴⁴ They are however unable to reach similar results because of the divergences in the legal provisions. Article 102 TFEU can simply not be applied to non-dominant participants, and Section 2 of the Sherman Act does not apply to exploitative conducts.

The difference between the two competition law systems are, however, not necessarily undesirable. A SEP owner is in fact subject to the limitation of both systems. To avoid a liability under EU competition law, the SEP owner might avoid a specific practice also in the US, and *vice versa*. For example, the SEP owner's deceptive practice might constitute an anticompetitive behavior under Section 2 of the Sherman Act. The prospect of facing an antitrust liability under US antitrust law might deter the SEP owner from engaging in deceptive practices when participating in an European SSO, given that also such conduct could be challenged under US

Section 5 to prohibit unfair methods of competition, which both Congress and the Supreme Court have expressly deemed to extend beyond the Sherman Act").

543 Analysis Of Proposed Consent Order To Aid Public Comment In the Matter of Motorola Mobility LLC and Google Inc., File No. 121-0120 (2013) ("[...] under its standalone Section 5 authority, the Commission can reach opportunistic conduct that takes place after a standard is adopted that tends to harm consumers and undermine the standard-setting process.").

544 For US see, e.g., *Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc.* and the *Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd.* (Feb. 13, 2012). "In light of the [...] complex issues raised by the intersection of the intellectual property rights and antitrust law at issue here, [...] the division will not hesitate to take appropriate enforcement action to stop any anticompetitive use of SEP rights." For the EU see: *Press Release, J. Almunia, Industrial policy and Competition policy: Quo vadis Europa?*, SPEECH/12/83, *Revue Concurrences*, (Feb. 10, 2012) ("Standardization processes must be fair and transparent, so that they are not in the hands of established firms willing to impose their technologies. But it is not enough. We must also ensure that, once they hold standard essential patents, companies give effective access on fair, reasonable and non-discriminatory terms. This is crucial if we want industries and businesses relying on such patents to develop freely to their utmost potential. I am determined to use antitrust enforcement to prevent the misuse of patent rights to the detriment of a vigorous and accessible market.").

antitrust law. In this respect, EU competition law and US antitrust law might hence complement each other and fill some of the each other's gaps when addressing the SEP owner's conduct.

Finally, it is also evident that in both jurisdictions there is a substantial amount of legal uncertainty concerning the SEP owners' antitrust liability for their opportunistic practices. The applicability of competition law is particularly unclear when addressing the SEP owner's strategic licensing practices. It remains for instance unclear whether the refusal to license a SEP could constitute an anticompetitive conduct under Section 2 of the Sherman Act. Similarly, it is also unclear whether, and under which conditions, the imposition of exploitative licensing conditions would constitute an anticompetitive behavior.

PART III

ANTITRUST REMEDIES

The previous section evaluated the SEP owner's antitrust liability for acting deceptively during the standardization process and/or licensing its SEP under strategic licensing terms. The present chapter takes a step further and evaluates the remedies that can be imposed on a SEP owner that has been found violating competition law. What remedies have been imposed? Are the remedies able to adequately address the anticompetitive concerns? Is there a risk that the imposed remedies will deter SEP owner's pro-competitive conducts?

The chapter starts by discussing the general goal of antitrust remedies and the process through which remedies are selected and imposed on the violator. Next, it analyzes the remedies adopted in the legal practice when addressing the SEP owner's conduct. Finally, the chapter discusses the effects of adopting remedies through settlement procedures, a mechanism that has been prevalently used in the context of SEPs.

1. REMEDIES AND SANCTIONS

1.1. The goals of antitrust remedies

Antitrust remedies aim at different goals. One of the primary goals of the antitrust intervention is to stop the anticompetitive conduct. Council Regulation 1/2003 provides that "where the Commission finds that there is an infringement of Article 101 or of Article 102 of the Treaty, it may . . . impose . . . remedies . . . necessary to bring the infringement effectively to an end."⁵⁴⁵ Similarly, the US Supreme Court maintained that the aim of the antitrust remedy is to stop the act of

⁵⁴⁵ Council Regulation No 1/2003 of 16 December 2002 on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 7.

monopolization or attempted monopolization, and in this way bring the anticompetitive practice to an end.⁵⁴⁶

In both jurisdictions, the antitrust intervention has also a more general purpose: to prevent the recurrence of anticompetitive practices. The antitrust intervention aims to prevent future anticompetitive practices by the same undertaking (specific deterrence), as well as deterring other market participants to engage in similar conducts (general deterrence).⁵⁴⁷ The competition law apparatus provides various tools that aim at specific and general deterrence. The most direct tool is the imposition of a monetary sanction on the violator, either through a fine, or through damages awards that result from private litigation. The prospect of facing high financial loss will generally deter both the violator and other companies from engaging in anticompetitive practices. Behavioral or structural remedies might also have a deterrent effect.⁵⁴⁸

Besides stopping the anticompetitive practice, and deterring future abuses, antitrust remedies might have also more specific goals. The U.S. Supreme Court noted that merely prohibiting the undertaking to further engage in an anticompetitive practice “is not adequate to protect the public interest.”⁵⁴⁹ It explained that if the remedy was limited to a prohibition of the anticompetitive conduct, “those who had unlawfully built their empires could preserve them intact”, and in this way profit from their anticompetitive conduct.⁵⁵⁰ The U.S. Supreme Court emphasized that the imposed remedy should also aim other goals, such as “render impotent” the unlawfully obtained monopoly power,⁵⁵¹ deny to the undertaking the fruits of its anticompetitive

⁵⁴⁶ See, e.g., *United States v. Grinnell Corp.*, 384 US 563, 577 (1966); *United States v. United Shoe Machinery Corp.*, 391 US 244, 250 (1968).

⁵⁴⁷ For EU see: Guidelines on the Method of Setting Fines Imposed Pursuant to Article 23(2)(a) of Regulation No 1/2003 § C 210/2, 2006, O.J., ¶ 4. (“That task not only includes the duty to investigate and sanction individual infringements, but it also encompasses the duty to pursue a general policy designed to [...] steer the conduct of undertakings in the light of [competition law] principles. [...] Fines should have a sufficiently deterrent effect, not only in order to sanction the undertakings concerned (specific deterrence) but also in order to deter other undertakings from engaging in, or continuing, behaviour that is contrary to Articles 81 and 82 of the EC Treaty (general deterrence).”). For US see: *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 639 (1981). (“The very idea of treble damages reveals an intent to punish past, and to deter future, unlawful conduct.”).

⁵⁴⁸ I. Lianos, *Competition Law Remedies: In search of a theory*, 14/2011 LAW AND GOVERNANCE IN EUROPE WORKING PAPER SERIES (2011) (pointing out that forward looking structural and behavioral remedies also aim at deterrence).

⁵⁴⁹ *Schine Chain Theatres, Inc. v. United States*, 334 US 110, 128 (1948).

⁵⁵⁰ *Id.*

⁵⁵¹ *Id.* at 128-129. See also: *United States v. Grinnell Corp.*, 384 US 563, 577 (1966).

conduct,⁵⁵² cure (as far as practicable) the effects of the anticompetitive conduct,⁵⁵³ and “restore the conditions for a workable competition.”⁵⁵⁴

There is no comparable general statement in the EU case law. Some commentators nevertheless suggest that also in the EU, antitrust remedies have other goals than stopping the anticompetitive conduct.⁵⁵⁵ In making this point, commentators often refer to *Ufex v. Commission*,⁵⁵⁶ where the ECJ maintained that the Commission cannot refuse to start an antitrust investigation simply because the anticompetitive conduct has ended. The ECJ argued that, if the anti-competitive effects continue even after the conduct has ceased, the Commission should intervene, and seek to eliminate or neutralize the effects that arose from the anticompetitive practice.⁵⁵⁷ In the view of those commentators, the ECJ statement confirms that EU antitrust remedies aim at other goals than merely stopping the anticompetitive conduct.⁵⁵⁸

The specific goals of antitrust intervention are particularly evident when the antitrust remedy is negotiated between the parties, as part of the settlement procedure. The word settlement will be used to refer to both settlements between private parties as well as settlements with public prosecutors in the EU (in the legal jargon, commitment decisions) and in the US (in the legal jargon, consent agreement, order, or decree). Both jurisdictions provide the possibility to end the antitrust procedure with a settlement. In the EU, Article 9 of the Regulation 1/2003 provides that the Commission can formally end a case by accepting the commitments offered by the undertaking under investigation.⁵⁵⁹ Similarly, in the US both private and public

⁵⁵² *United States v. United Shoe Machinery Corp.*, 391 US 244, 250 (1968).

⁵⁵³ *United States v. U.S. Gypsum Co.*, 340 US 76, 89 (1950).

⁵⁵⁴ *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295, 347 (D. Mass. 1953).

⁵⁵⁵ See, e.g., P. Hellstrom, F. Maier-Rigaud, F. Wenzel Bulst, *Remedies in European Antitrust Law*, 76 ANTITRUST L. J. 46 (2009). Ioannis Lianos, *Competition Law Remedies: In search of a theory*, 14/2011 LAW AND GOVERNANCE IN EUROPE WORKING PAPER SERIES (2011).⁵⁵⁶ Case C-1 19/97 P *Ufex v Commission*, ECR. I-1341 (1999).

⁵⁵⁶ Case C-1 19/97 P *Ufex v Commission*, ECR. I-1341 (1999).

⁵⁵⁷ *Id.* at 94.

⁵⁵⁸ *Id.* at 83, 95 (Note that the judgment does not refer, however, to remedies *per se*, but rather to the Commission ability to intervene).

⁵⁵⁹ Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 9. The Commission is not obliged to accept the commitments, but can proceed with the formal procedure. It will however consider to end a procedure with a commitment decision, if it believes that the offered commitments are sufficient to meet the anticompetitive concerns raised in the investigation.

litigation may be solved through a settlement. The ability to end an antitrust investigation is not expressly provided in a statute, but it is rather an implied right “derived from the historical right of prosecutors to initiate and conclude legal proceedings.”⁵⁶⁰ In both jurisdictions, antitrust settlements are becoming an increasingly common way to conclude antitrust investigations initiated by antitrust authorities.⁵⁶¹

The remedies agreed through antitrust settlements might depart considerably from those that could be adopted through an infringement decision. The competition authority or the private plaintiff might obtain a remedy that would be difficult, if not impossible, to achieve under a formal infringement decision or adjudicatory process.⁵⁶² Particularly remedies agreed with competition authorities often do not only aim at terminating the anticompetitive conduct and at preventing its reoccurrence, but also aim at stopping the harm that arises from the challenged conduct. As a result, they might aim at more specific goals, such as facilitating entrance in the market, fostering competition, rendering the market more competitive, or depriving the consumer of the unlawfully acquired market power.⁵⁶³

The settlement adopted in *Norwegian Gas Negotiation Committee* provides a clear example.⁵⁶⁴ The case concerned joint sales of Norwegian natural gas through a single seller, the so called GFU. In 2001, the Commission initiated formal proceedings against several Norwegian gas companies arguing that the GFU scheme was incompatible with European competition law, mainly Article 101 TFEU. The case was concluded through an informal settlement, which provided, *inter alia*, the reservation

⁵⁶⁰ C. F. Phillips Jr, *The Consent Decree In Antitrust Enforcement*, 18 WASHINGTON AND LEE LAW REVIEW 39, 42 (1961).

⁵⁶¹ See, e.g., D. H. Ginsburg & J. D. Wright, *Antitrust Settlements: The Culture of Consent* (2012), available at http://www.ftc.gov/sites/default/files/documents/public_statements/antitrust-settlements-culture-consent/130228antitruststlmt.pdf (stating that more than 90 percent of the antitrust investigations initiated by the Department of Justice (DOJ) and the Federal Trade Commission (FTC) are concluded by a settlement); M. Mariniello, *Commitments or Prohibition? The EU Antitrust Dilemma*, BRUEGELPOLICYBRIEF (2014).

⁵⁶² See, e.g., : G. Monti, *Managing the Intersection of Utilities Regulation and EC Competition Law*, 4(2) COMPETITION LAW REVIEW, 123 (2008).; M. Siragusa and E. Guerri, *Antitrust Settlements under EC Competition Law: The Point of View of the Defendants*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis ed. 2008).

⁵⁶³ E. Hjelmeng, *Competition Law Remedies: Striving For Coherence or Finding New Way?* 50 COMMON MARKET LAW REVIEW 1007, 1019-1021 (2013).

⁵⁶⁴ Press Release, Commission successfully settles GFU case with Norwegian gas producers, IP/02/1084 (Jul. 2002).

of certain gas volumes for new customers, who in the past had not bought gas from Norwegian gas producers. Statoil agreed to make available 13 BCM of gas to new customers on commercially competitive terms. The remedy imposed on the concerned undertaking was an obligation that went beyond what the Commission could have imposed if finding an anticompetitive agreement. It is also evident that the remedy did not only aim at stopping the anticompetitive agreement, but also tried to facilitate the development of competition in the market. This is a clear illustration how remedies adopted through settlements might add a different perspective to the goals of the antitrust intervention, a goal that goes beyond the mere aim of stopping the anticompetitive conduct and preventing its re-occurrence.⁵⁶⁵

Finally, both EU competition law and US antitrust law provide also remedies that aim at the compensation of victims that suffer a loss because of the violator's anticompetitive conduct. Section 4 of the Clayton Act provides that "[a]ny person who shall be injured in his business or property by . . . anything forbidden in the antitrust laws may sue . . . shall recover threefold damages by him sustained, and the cost of suit, including a reasonable attorney's fee".⁵⁶⁶ The EU Treaties, on the contrary, do not provide explicitly for the right to compensation. The ECJ has nonetheless clarified (although referring to a collusive practice) that "[t]he full effectiveness of [the competition law provisions] would be put at risk if it were not open to any individual to claim damages for loss caused to him by a contract or by conduct liable to restrict or distort competition."⁵⁶⁷ It consequently concluded that the injured party has a right to damages against the violator. Parties injured by the anticompetitive conduct can recover, nevertheless, only compensatory damages, as opposed to punitive (treble) damages available under US antitrust law.

In sum, both jurisdictions seem to share similar objectives when imposing antitrust remedies. Termination of the anticompetitive conduct and deterrence of future anticompetitive practices seem to be the main goals. Antitrust remedies, particularly those adopted through a settlement procedure, might nonetheless also

⁵⁶⁵ See also *British Airways/American airlines* case COMP/39596, Decision of 14 July 2010 (facilitating market entry by involving slot-surrender).

⁵⁶⁶ Clayton Antitrust Act, § 4.

⁵⁶⁷ Case C-453/99 *Courage v Crehan*, ECR I-6314, ¶ 26 (2001).

aim at other goals, such as stopping the anticompetitive harm that has arisen from the anticompetitive practice.

1.2. Types of remedies

Antitrust remedies can be divided into two major groups: behavioral remedies and structural remedies. The first group—behavioral remedies—includes remedies that, as the name suggests, aim to shape the violator’s behavior. Behavioral remedies might be either prohibitory or affirmative. Prohibitory behavioral remedies, as the cease and desist order, prohibit the undertaking to engage in a specific anticompetitive practice. The remedy might prohibit a specific unlawful act, or might include the prohibition to engage in similar conducts that may result in the recurrence of the violation (so-called “fencing in” provisions). A prohibitory remedy is generally not difficult to design and administer. It is also unlikely to be overbroad, or impose unnecessary inefficiency on the market, given that it typically does not have a significant effect on the violator’s structure and functioning in the market. The imposition of a behavioral remedy might nonetheless require the adoption of a monitoring mechanism, given that even after the intervention, the violator might still have the incentive to circumvent the imposed remedy and continue its anticompetitive conduct.⁵⁶⁸

The imposition of a prohibitory remedy is not always sufficient to achieve the goals of the antitrust intervention. In some circumstances, the enforcer might have to impose an affirmative behavioral remedy on the violator.⁵⁶⁹ An affirmative behavioral remedy was for example imposed in the Microsoft case, where the European Commission ordered Microsoft to un-tie the supply of Windows and Windows Media Player, by offering a version of its Windows operating system without the Media Player program.⁵⁷⁰ Affirmative behavioral remedies are generally more difficult to design. The enforcer will have to define precisely the obligation imposed on the violator, a task that usually requires a deeper understanding of the market dynamics.

⁵⁶⁸ OECD, Remedies and Sanctions in Abuse of Dominance Cases (2003).

⁵⁶⁹ For EU see: Case 6-7/73 Istituto Chemioterapico Italiano S.p.A. and Commercial Solvents Corp. v. Comm’n, ECR 223, at. 45 (1974); For US see: International Salt Co. v United States, 332 U.S. 392, 401 (1947).

⁵⁷⁰ Press release, European Commission, Commission concludes on Microsoft investigation, imposes conduct remedies and a fine, IP/04/382 (Mar. 24, 2004).

Access remedies are one of the possible affirmative behavioral remedies. They impose on the violator a duty to grant access to a specific facility. Access remedies are considered “regulatory” in nature, given that they generally require the enforcer to determine the exact access terms, including the determination of the access price, a function that is generally performed by regulatory agencies, rather than competition authorities or courts.⁵⁷¹ As other affirmative remedies, access remedies might also require monitoring mechanisms. In some cases, it might be even necessary to adopt a mechanism that allows the remedy to be adjusted in light of changing market conditions. It is plausible that a request for modifying an access remedy may come from the party having the obligation or from the party benefiting from it, and an independent means of adjudicating such requests is essential.⁵⁷² As a result, access remedies are often considered as the most complex remedies to design and supervise.

The second group of remedies—structural remedies—does not focus on the violator’s behavior, but rather affects its business structure. The enforcer might for example impose on the violator the obligation to divest part of its business.⁵⁷³ A structural remedy was initially suggested by Judge Jackson in the Microsoft case, where it ordered the breakup of Microsoft in two separate units, one unit for the Windows operating systems, and other for the remaining parts.⁵⁷⁴ Structural remedies are generally easier to administer than behavioral remedies. There is generally no need to adopt monitoring mechanisms that verify whether the violator is still engaging in the anticompetitive practice, given that by changing the violator’s business structure, successful structural remedies alter the undertaking’s ability and its incentive to engage in anticompetitive conduct.⁵⁷⁵ Structural remedies are nevertheless very intrusive. They interfere substantively with the violator’s existing

571 *See, e.g., Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004) (where the Supreme court pointed that imposing a duty to deal may require “antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill-suited.”).

572 G. J. Werden, *Remedies For Exclusionary Conduct Should Protect And Preserve The Competitive Process*, 76 ANTITRUST LAW JOURNAL 65(2009).

573 S. Papon, *Structural v Behavioral Remedies in Merger Control: a Case to Case analysis*, 30(1) EUROPEAN COMPETITION LAW REVIEW (2009).

574 *United States v. Microsoft Corp.*, 97 F.Supp.2d 59, 64 (D.C. Cir. 2000).

575 P. Hellström, F. Maier-Rigaud, F. Wenzel Bulst., *Remedies In European Antitrust Law*, 76 ANTITRUST LAW JOURNAL 43 (2009).

business model, and consequently impose a higher risk of inefficiencies, which can harm the violator, its shareholders, labor, and consumer interests.⁵⁷⁶

Besides behavioral or structural remedies, a company that has violated competition law might also face other consequences. As mentioned, the European Commission can impose on the violator (and often does) a financial penalty, up to 10 percent of the violator's turnover.⁵⁷⁷ In the US, there are no monetary sanctions for the violation of Section 2 of the Sherman Act at the Federal level.⁵⁷⁸ The violator might nonetheless face a comparable financial loss because of the treble damages awarded in private damages actions.

In sum, a vast set of antitrust remedies is available to address the undertaking's unilateral practices with the prospect of achieving the goals of the antitrust intervention. No particular kind of remedy is "automatic". The enforcer needs to tailor the remedy to the circumstances of the specific case, and the effects the anticompetitive practice imposed on the market.

1.3. The selection of the antitrust remedy

Competition authorities and courts enjoy a significant discretion in selecting the antitrust remedy to be adopted in each specific case. It is nonetheless possible to observe that several principles govern the selection process.

First, in both jurisdictions behavioral remedies are more commonly adopted in cases addressing the infringer's unilateral conduct. Although structural remedies are not rare in antitrust enforcement, their use is most prominent in the cases of mergers and acquisitions, where competition authorities consider structural remedies effective in addressing the competitive concerns raised during the merger clearance procedure, but also adequate because they require less supervision.⁵⁷⁹ The use of structural

⁵⁷⁶ S. W. Waller, *Past, Present, And Future of Monopolization Remedies*, 76 ANTITRUST LAW JOURNAL 1 (2009).

⁵⁷⁷ Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 23.

⁵⁷⁸ State antitrust laws might nonetheless include provisions for civil penalties, whether in the form of civil fines, restitution, disgorgement, or forfeitures. See: H. First, *The Case for Antitrust Civil Penalties*, 08-38 LAW & ECONOMICS RESEARCH PAPER SERIES NEW YORK UNIVERSITY (2008).

⁵⁷⁹ For the EU, the Commission made clear that in merger cases it will only accept remedies that capable of being implemented effectively within a short period of time. Structural remedies will normally meet these conditions, given that they are generally effective in addressing the

remedies is on the contrary less common in cases addressing unilateral practices. Courts and competition authorities have been generally more cautious in ordering a division of a company that has always operated as a single entity. As explained by the court in *United States v. Alcoa*, “a corporation, designed to operate effectively as a single entity, cannot readily be dismembered of parts of its various operations without a marked loss of efficiency.”⁵⁸⁰ US courts have consequently emphasized that divestiture is a remedy that is imposed only with great caution, and preference should be generally given to behavioral relief.⁵⁸¹ Similarly, in the EU, the preference for behavioral remedies is clearly stated in Article 7 of the Regulation 1/2003, which determines that the Commission can impose a structural remedy only where there is no equally effective behavioral remedy, or where an equally effective behavioral remedy would be more burdensome for the undertaking.⁵⁸²

Second, courts and competition authorities should also select a remedy that is proportional to the harm caused by the anticompetitive conduct. The imposition of a harsh, broad remedy is indeed able to stop the anticompetitive conduct and have a strong deterrent effect. It might however also hinder procompetitive practices, and through this, harm, rather protect competition in the market. The antitrust remedy should thus aim to achieve the goals of the antitrust intervention, without unnecessarily chilling legitimate competitive practices. In the EU, the principle of proportionality of the antitrust remedy is affirmed in Article 7 of Regulation 1/2003.

anticompetitive concerns and do not require further monitoring. “[C]ommitments which are structural in nature, such as the commitment to sell a business unit, are, as a rule, preferable from the point of view of the Merger Regulation's objective, inasmuch as such commitments prevent, durably, the competition concerns which would be raised by the merger as notified, and do not, moreover, require medium or long-term monitoring measures.” (Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, 2008 O.J. C 267).. For the US see: “[S]tructural remedies, often preferred in merger cases where they can be simple, relatively easy to administer, and sure to preserve competition, are less favored in Section 2 cases where they often would require structural change to an existing unitary firm that had not grown by acquisition.” (U.S. DOJ, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT REPORT, Chapter 9. (2008))

⁵⁸⁰ *United States v. Alcoa*, 91 F. Supp. 333, 416 (S.D.N.Y. 1950).

⁵⁸¹ *See, e.g., United States v. Microsoft*, 253 F. 3d 34, 80, (D.C. Cir. 2001) (“Absent some measure of confidence that there has been an actual loss to competition that needs to be restored, wisdom counsels against adopting radical structural relief.”).

⁵⁸² Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 7 (“Changes to the structure of an undertaking as it existed before the infringement was committed would only be proportionate where there is a substantial risk of a lasting or repeated infringement that derives from the very structure of the undertaking.”).

The principle or proportionally applies also when imposing the fine. Not only must the Commission set a proportional level of fine,⁵⁸³ but it also needs to evaluate whether the imposition of a fine is appropriate in the first place. When, for example, the competitive conduct is a novel type of abuse, the Commission might decide not to impose a fine—or impose only a symbolic fine.⁵⁸⁴ The U.S. Supreme Court also emphasized that the remedy should go no farther than the violation or the threat of violation.⁵⁸⁵

Finally, the imposed antitrust remedy should ideally be easy to administer and not require an extensive supervision from the part of the enforcer. This consideration seems particularly important in the US, where the Supreme Court stated that “[n]o court should impose a [remedy] that it cannot . . . adequately and reasonably supervise.”⁵⁸⁶ It further added that “the problem should be deemed irremedia[ble] by antitrust law when [the remedy] requires the court to assume the day-to-day controls characteristic of a regulatory agency.”⁵⁸⁷ Judge Posner suggested that “[t]he nature of the remedy sought in an antitrust case is often an important clue to the soundness of the antitrust claim.”⁵⁸⁸ In the U.S., the difficulty in designing and administering the antitrust remedy might affect the antitrust intervention. A remedy that is too difficult to administer might thus suggest that the conduct should not be addressed through antitrust law. The situation is however different in the EU, where Commission’s representatives have explained in several occasions that “the finding of an antitrust infringement is not dependent upon the ease of finding or designing a suitable remedy for that conduct.”⁵⁸⁹ In other words, the difficulty in designing the remedy does not affect the antitrust liability under EU competition law.

⁵⁸³ The criteria for the determination of a fine have been laid out in the Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003, 2006 O.J. C/210 2.

⁵⁸⁴ *See, e.g.*, T-99/04 *Treuhand v Commission*, judgment of 8 July 2008 (where the Commission condemned the consultancy firm AC-Treuhand for facilitating the coordination among cartel members. The Commission imposed a fine of 1.000EUR on account of the novelty of the approach taken by the Commission in the matter. The decision was confirmed by the General Court). For general discussion see: I. Lianos, *Competition Law Remedies: In search of a theory*, Law and Governance in Europe Working Paper Series (2011).

⁵⁸⁵ *International Salt Co. v. United States*, 332 U.S. 392, 400 (1947).

⁵⁸⁶ *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP; Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 415 (2004).

⁵⁸⁷ *Id.*

⁵⁸⁸ *Brunswick Corp. v. Riegel Textile Corp.*, 752 F.2d 261, 267, (7th Cir. 1984).

⁵⁸⁹ P. Hellstrom, F. Maier Rigaud, F. Wenzel Bulst, *Remedies in European Antitrust Law*, 76 ANTITRUST LAW JOURNAL 1, 49 (2009).

It is worth noting that the considerations listed above might be sometimes in contradiction to each other. What is proportional might be difficult to administer, and what is easier to administer might be disproportional. In this case, the determination of the remedy will depend on the importance the specific consideration bears in the individual case. The relevance of each consideration might vary between the two jurisdictions, but also depending on the procedure through which the enforcer adopts the remedy. The ECJ has clarified that the principle of proportionality has a different impact when a remedy is adopted through a commitment decision under Article 9 of Regulation 1/2003 than when part of an infringement decisions under Article 7 of Regulation 1/2003. It emphasized that, although the principle of proportionality applies also to commitment decisions, the Commission has only the duty to verify that the commitments address the expressed anticompetitive concerns and that the undertaking has not offered less onerous commitments than those necessary to adequately address those concerns.⁵⁹⁰

It should hence come as no surprise that remedies agreed through commitments may depart considerably from those that could be adopted through an infringement decision. This has been confirmed also by the ECJ, which maintained that “[u]ndertakings which offer commitments [...] consciously accept that the concessions they make may go beyond what the Commission could itself impose on them in a decision adopted under [an infringement decision].” The ECJ however noted that an undertaking might prefer such option, given that “the closure of the infringement proceedings brought against those undertakings allows them to avoid a finding of an infringement of competition law and a possible fine.”⁵⁹¹ Agreeing on stricter remedies might be hence a price to pay to end a lengthy and expensive legal action.

In sum, similar considerations govern the selection of remedies under EU competition law and U.S. antitrust, although their relevance might differ between

⁵⁹⁰ Case C-441/07 *European Commission v Alrosa Company Ltd*, 2010 E.C.R. I-05949, ¶ 36, 41 (“Although Article 9, unlike Article 7 of Regulation No 1/2003, does not expressly refer to proportionality, the principle of proportionality, as a general principle of European Union law, is none the less a criterion for the lawfulness of any act of the institutions of the Union, including decisions taken by the Commission in its capacity of competition authority [...] The specific characteristics of the mechanisms provided for in Articles 7 and 9 of Regulation No 1/2003 and the means of action available under each of those provisions are different, which means that the obligation on the Commission to ensure that the principle of proportionality is observed, but has a different extent and content, depending on whether it is considered in relation to the former or the latter article.”).

⁵⁹¹ Case C-441/07 *European Commission v Alrosa Company Ltd.*, ECR I-05949, at 38 (2010).

the two systems, as well between the procedures through which the remedy is imposed.

1.4. *Procedural matters*

Before evaluating the antitrust remedies that were adopted in the context of SEPs, it is worth discussing some procedural matters. Who can impose antitrust remedies on the violator? Through which procedures are remedies imposed? Are there significant differences between the EU and the US systems?

In the EU, the power to impose antitrust remedies lies in the hands of the European Commission, for cases prosecuted at the EU level, and in the hands of national competition authorities (NCAs), if the prosecution takes place at the national level. It is for the Commission and an NCA to determine the antitrust remedy to be applied against a company that has abused its dominant position. The Commission or an NCA are also empowered to impose an eventual fine on the violator.⁵⁹² Further, if the Commission or an NCA finds it necessary, it might also adopt an interim measure on the basis of a *prima facie* finding of infringement.⁵⁹³ Interim measures are adopted before a decision whether the challenged conduct amounted to an abuse of a dominant position. National courts might, on the other hand, award damages to those that have been injured by an anticompetitive conduct. They also have the ability to impose antitrust remedies, if, as part of a litigation, they find that a company has violated antitrust law. If the court finds that the undertaking has engaged in an anticompetitive conduct, it may issue a permanent injunction, with the purpose to stop the anticompetitive practice. However, remedies imposed by national courts have generally only an *inter partes* effect, and normally involve only a limited behavioral or structural relief. It is thus understandable that the most relevant antitrust remedies are generally imposed by the European Commission. Furthermore, it is easier for the

⁵⁹² Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 23.

⁵⁹³ Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, Article 8. The imposition of interim measures is based on a *prima facie* finding of infringement, without the need to establish the existence of an antitrust offence; this measure can be however used only when the Commission shows that the damage “could no longer be remedied by the decision to be adopted by the Commission upon the conclusion of the administrative procedure.”

Commission than for an NCA to impose and monitor a remedy that is to be applied across the EU.

In the United States, on the contrary, the power to impose remedies for infringements of U.S. antitrust law lies in the hands of courts. This is true for cases of both private and public enforcement.⁵⁹⁴ Private plaintiffs may ask the court to order the payment of threefold the damage caused by the anticompetitive conduct, as well as issue injunctions that will stop the anticompetitive conduct.⁵⁹⁵ Private actions, however, rarely involve significant injunctive or structural relief.⁵⁹⁶ More extensive injunctive relief is generally sought in the cases of public enforcement, where the legal action is brought by the FTC or the DOJ.

Besides seeking judicial remedies, the FTC also has the ability to adopt remedies through an administrative procedure. If the undertaking under investigation decides to contest the charges brought by the FTC, the complaint is adjudicated before an administrative law judge (ALJ) in a trial-type proceeding. The ALJ issues an “initial decision,” which can recommend the defendant an order to cease and desist from using the method of unfair competition. If the decision is appealed, the case is reviewed by the FTC, which issues its own final decision and that order that can be then appealed to a court of appeals.⁵⁹⁷

Cases where the antitrust remedy is agreed through a settlement follow a different procedure. In the EU, the company under investigation might offer commitments to the European Commission. If the Commission believes that the offered commitments are sufficient to address the anticompetitive concerns, and considers accepting them, it publishes the offered commitments and invites the interested parties to provide their comments. If the offered commitments pass the “market test,” the Commission can formally accept the commitments and make them

⁵⁹⁴ See, e.g., *International Salt Co. v. United States*, 332 U.S. 392, 400–01 (1947).

⁵⁹⁵ U.S. DOJ, *COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT REPORT* Chapter 9: Remedies (2008) (withdrawn on May 2009).

⁵⁹⁶ S. Weber Waller, *Remedies for Monopolization and Abuse of Dominance: A Little History and Some Thoughts on Disclosure and Access*, available at [http://www.biiel.org/files/3412_antitrust_marathon_\(weber_weller\).pdf](http://www.biiel.org/files/3412_antitrust_marathon_(weber_weller).pdf).

⁵⁹⁷ A Brief overview of the Federal Trade Commission’s Investigative and Law Enforcement Authority, Federal Trade Commission, Washington D.C. 20580 (July 2008), available at <http://www.ftc.gov/ogc/brfovrwv.shtm>.

binding.⁵⁹⁸ It is important to notice that the Commission is not obliged to accept the offered commitment, but can decide to follow the ordinary infringement procedure. Regulation 1/2003 also provides that the Commission should not consider solving the antitrust investigation through a Commitment decisions under Article 9, if it intends to impose a fine.⁵⁹⁹

In the United States, different settlement procedures are provided for cases of public or private enforcement. In the case of public enforcement, the DOJ can settle the dispute through a consent decree. The proposed consent decree must be filed with a US district court and published, giving in this way the opportunity to the interested parties to submit their comments.⁶⁰⁰ The reviewing court must then decide whether the proposed consent is in the public interest. Once a consent settlement has been confirmed, it has the same legal effect as a judgment in a fully litigated action.⁶⁰¹ Similarly, the FTC might end a case with a consent order, if the company decides to settle the charges (without admitting liability). The FTC's Bureau of Competition and Bureau of Economics review the consent order, and when the majority of the FTC Commissioners provisionally accept it, the agreement is published, giving the public the opportunity to comment on it. After the comment period, the FTC may withdraw its acceptance of the agreement, modify it, or accept it as final. Once the consent order is accepted, it has the same force as FTC's final order. Where, on the other hand, negotiations fail, or the FTC does not offer a consent order procedure, the FTC may initiate a formal adjudicatory proceeding.⁶⁰²

Also private antitrust disputes may be solved through settlements. Nonetheless, the parties of the disputes have a wider discretion in drafting their agreement, consistent with contract law principles.⁶⁰³ The situation is different in the case of class actions, where courts have an active role in reviewing the settlement. The purpose of

⁵⁹⁸ If the "market test" reveal that the offered commitments are not appropriate, the Commission can re-evaluate them, or abandon the commitment decision all together.

⁵⁹⁹ Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, 2003 O.J. L 1, ¶ 13.

⁶⁰⁰ The procedure is outlined in the Tunney Act 15 U.S.C. § 16 (b) to (h).

⁶⁰¹ *See, e.g.*, C. Phillips, *The Consent Decree in Antitrust Enforcement*, 8 WASHINGTON AND LEE LAW REVIEW 39 (1961).

⁶⁰² For general discussion *see* A. J. Miller, *A Procedural Approach to "Unfair Methods of Competition"*, 93 IOWA LAW REVIEW 1485 (2008).

⁶⁰³ S. Goldfein and T. Pak, *Negotiated Antitrust Settlements: Some Perspectives from U.S. Defendants*, in 13th Annual EC Competition Law and Policy Workshop (2008).

such supervision is to protect the interest of the vast majority of class members who are absent and hence have no direct representation in the litigation.

In summary, there are substantive procedural difference between the EU and the US system. In the EU, the remedies are imposed by the competition authorities, and, only in limited occasions, by national courts. In the US, on the contrary, the authority to impose antitrust remedies lies largely in the hands of courts, which are in charge to impose antitrust remedies in cases of both public and private enforcement. The difference between the two systems is nevertheless less prominent in case where the antitrust dispute is solved through a settlement. In those cases, the remedy is agreed between the parties of the disputes, often involving some form of collaboration of the public (generally through comments).

Having now reviewed the many type of remedies, their goals and the procedure through which they are set, the chapter now analyzes the remedies that have been adopted in cases addressing the SEP owner's conduct.

2. REMEDIES IN THE EXISTING LEGAL PRACTICE

The SEP owner's conduct has been challenged under the provisions of competition law both in the European Union and in the United States. What remedies have been adopted to address the concerns related to the SEP owner's conduct? Were they able to effectively address the problems that arise in the context of SEPs? Were different remedies applied in the European Union and in the United States?

2.1. Remedies for the SEP owner's deceptive conduct

US courts have recognized that the SEP owner's deceptive conduct during the standardization process can trigger an antitrust liability.⁶⁰⁴ The US cases triggered the adoption of two type of remedies. In some cases, the remedy prevented the SEP owner from enforcing the SEP that was implemented in the standard because of a deception. In *Dell*, for example, where Dell was accused of falsely certificating that the

⁶⁰⁴ See discussion in: Chapter IV.

discussed standard does not infringe any of Dell's patents, Dell entered in a consent agreement, pursuant to which the FTC prohibited Dell to enforce its SEP.⁶⁰⁵ As a result, Dell could not collect any royalty from manufacturers using its SEPs. In a different occasion, the FTC did not completely prevent the SEP owner from enforcing its SEP, but rather limited the SEP owner's freedom in determining the licensing conditions. This was the case in *Rambus*, where the FTC imposed a cap on the royalties that Rambus could charge for its SEPs. (The remedy was subsequently dismissed by the D.C. Circuit, which reversed the finding of infringement, by maintaining that the FTC failed to prove that Rambus conduct was anticompetitive. Consequently no remedy was imposed.)⁶⁰⁶

The two types of remedies that the FTC imposed against the deceptive SEP owners have similar objectives. Neither of the remedies aims to stop the anticompetitive conduct, given that the deception took place in the past—during the standardization process—and it had already ended at the time when the remedy was adopted. Both remedies however aimed to constrain the use of the unlawfully obtained monopoly power. In doing so, they use different tools. On one hand, the prohibition to enforce the SEP prevented the SEP owner from exercising *any* market power that the SEP owner might have enjoyed from the SEP. The duty to license a SEP on FRAND terms, on the other hand, is a more lenient remedy. It does not completely eliminate the SEP owner's ability to generate income from licensing, but only limits it to a “reasonable” level. Such remedy is nonetheless more difficult to design, given that it requires the enforcer to determine the exact licensing terms to calculate the royalties. It might also require a subsequent revision, if the market conditions significantly change, and there is a need to re-evaluate the appropriateness of the determined licensing conditions.

605 Press release, Dell Computer Settles FTC Charges: Won't Enforce Patent Right for Widely Used Computer Feature, F.T.C. (Nov. 2, 1995), *available at* <http://www.ftc.gov/opa/1995/11/dell.shtm>.

Similarly, also the consent decrees adopted in the in the Unocal case prohibited the enforcement of SEPs (Union Oil Co. of Cal., F.T.C., No. 9305 (Jul. 27, 2005)).

606 *Rambus Inc. v. FTC*, 522 F. 3d 456, 462 (D.C. Cir. 2008). Note, that the SEP owner's deceptive conduct has been condemned in several private disputes (*see, e.g.*, *Research in Motion Limited v. Motorola Inc.*, 644 F.Supp.2d 788 (ND Tex, 2008); *Broadcom Corp. v. Qualcomm Inc.*, 501 F3. d. 297 (3rd Cir, 2007). Most litigated cases were concluded with a settlement agreement solving the disagreement between the parties of the dispute and do not provide a relevant basis for our analysis (*See, e.g.*, Brooke Crothers, Qualcomm, Broadcom reach \$891 million settlement (Apr. 26, 2009), *available at* http://news.cnet.com/8301-13924_3-10227815-64.html; Andrew Munchbach, Motorola and RIM reach patent deal (Jul 11, 2010), *available at* <http://bgr.com/2010/06/11/motorola-and-rim-reach-patent-deal/>).

At first sight, the choice between the two remedies seems a choice between a remedy that is easier to design, but more intrusive, and a remedy that is more proportional, but more difficult to design and administer. A deeper evaluation of the FTC's reasoning nonetheless reveals a different explanation. In the Rambus case, the FTC explained that it had in principle the authority to impose on Rambus a compulsory license on a royalty free basis, but it considered that the imposition of such remedy was not appropriate given the circumstances of the case. The FTC explained that there was insufficient evidence that absent Rambus' deception, the SSO would have implemented in the standard a different technology.⁶⁰⁷ It thus considered that completely prohibiting Rambus to enforce its SEPs was not appropriate. In other words, the FTC opted for a more lenient remedy, because it was not clear whether the deceptive behavior allowed Rambus to obtain the implementation of its technology in the standard, and consequently acquire market power. Later developments in the Rambus case however showed that doubts concerning the effect the deceptive behavior had on the standardization process, and on the acquisition of market power, are not a reason for a more lenient remedy, but rather a reason for the rejection of the antitrust claim.⁶⁰⁸ If it is not clear whether the SEP would be implemented in the standard in absence of the SEP owner's deceptive conduct, no antitrust liability should arise, and no remedy imposed. This suggests that when evidence support the finding of an antitrust liability for the SEP owner's deceptive behavior, the prohibition to enforce the SEPs is a more likely remedy.

Policy considerations support the adoption of a strict remedy, such as the prohibition to enforce the SEPs. The SEP owner would not have anything to lose in acting deceptively during the standardization process, if the only remedy it would face

607 *Rambus Inc. v. FTC*, 522 F. 3d 456, 462 (D.C, Cir. 2008). (“[T]he Commission refused to compel Rambus to license its relevant patents royalty-free because there was insufficient evidence that “absent Rambus's deception” JEDEC would have standardized non-proprietary technologies instead of Rambus's; thus, Complaint Counsel had failed to show that such a remedy was “necessary to restore competition that would have existed in the ‘but for’ world.[...] Instead, the Commission decided to compel licensing at “reasonable royalty rates”, which it calculated based on what it believed would have resulted from negotiations between Rambus and manufacturers before JEDEC committed to the standards. The Commission’s order limits Rambus’s royalties for three years to 0.25% for JEDEC-compliant SDRAM and 0.5% for JEDEC-compliant DDR SDRAM (with double those royalties for certain JEDEC-compliant, non-DRAM products); after those three years, it forbids any royalty collection.”).

608 As explained, an antitrust liability can arise only in the plaintiff shows that the SEP would not be included in the standard but for deception. For discussion see: Chapter III, at [2.2. Liability under U.S. antitrust law](#).

was the duty to license the SEP on FRAND terms, an obligation that the SEP owner that does not act deceptively would have to accept anyway. One could argue that the imposition of a strict remedy could deter the participation in the standardization process. If the SEP owner loses the ability to enforce its SEP, just because of a negligent failure to disclose a patent, the remedy might indeed discourage the SEP owner from participating in the standardization process. It can thus deter a pro-competitive practice. However, this argument disregards the fact that courts have adopted a strict standard of proof when condemning the SEP owner's deceptive practices. No liability arises in a case of an involuntary failure to disclose the patent interest. Courts will condemn only cases, where the SEP owner engaged in an intentionally deceptive practice, which allowed an anticompetitive acquisition (or maintenance) of market power. When those conditions are met, the SEP owner's deceptive conduct has no pro-competitive effect, and there is consequently no risk that the imposition of a strong remedy would deter practice that are beneficial for consumers.

It is also worth noting that neither of the remedies (neither the prohibition to enforce a SEP, nor the duty to license under fair terms) is able to fully remove the effects of the SEP owner's anticompetitive conduct. Absent the deception, the SSO would implement an alternative technology in the standard (or at least exclude the technology in question from the standard).⁶⁰⁹ Technologies that were competing for the implementation in the standard, but were excluded because of the SEP owner's deceptive conduct, will not be implemented in the standard. None of the available remedies is thus able to restore the "but for market."

The inability to restore the "but for market" is not particularly uncommon in antitrust law. Also when addressing other anticompetitive practices, the remedy is not necessarily able to restore the condition that would exist in the but for world. For example, if the dominant undertaking's tying practice excluded companies from the market, or prevented their entrance, the remedy will not necessarily allow the excluded companies to (re)enter the market. However, the inability to restore the but for market does not indicate that the antitrust intervention against the deceptive SEP owner is ineffective. It still protects consumers from the exercise of an illegitimately

609 For detailed discussion see: Chapter IV: [2.2.A. Section 2 liability](#).

obtained market power, and it might have both a specific and general deterrent effect. The inability to restore the but for market after the intervention does nonetheless suggest that it is desirable to develop mechanisms that prevent the SEP owner's deceptive conduct *ex ante*, that is, before the anticompetitive injury arises. This again weighs in favor of the adoption of a stricter remedy, which has a stronger ability to deter future deceptive practices. Therefore, the prohibition to enforce the SEPs seems the appropriate remedy in cases where the SEP owner's deceptive conduct amounts to an anticompetitive conduct.

2.2. Remedies for the strategic use of SEPs

Competition authorities and private plaintiffs have challenged also the SEP owner's strategic licensing practices, such as the departure from a previously made licensing commitment, the imposition of excessive licensing fees, and the use of injunctions. Although those practices were rarely condemned as anticompetitive, remedies were often adopted as part of antitrust settlements. Those cases triggered the application of different antitrust remedies, depending on the effects the challenged conduct imposed on the market.

2.2.A. Prohibitory remedies

Prohibitory behavioral remedies were often sufficient to address the anticompetitive concerns related to the SEP owner's licensing practice. In cases concerning a departure from a previously made licensing practice, the enforcer simply prohibited the SEP owner to depart from the licensing commitment made by the previous SEP owner. In *N-Data*, for example, the SEP owner entered in a consent order and agreed not to enforce its SEPs, unless it first offered a paid-up, royalty free license in exchange for a one-time fee of \$1.000, a licensing offer made by the previous SEP owner.⁶¹⁰ Similarly, in *IPCom* the Commission welcomed the declaration of

610 Decision and Order, Negotiated Data Solutions LLC, Docket No. C-4234, F.T.C. (Sep. 23, 2008).

IPCom that it was ready to honor the FRAND commitments made by the previous SEP owner, before the transfer of SEPs in question.⁶¹¹

Lately, the authorities' attention has focused on the SEP owner's use of injunctions, where the primary concern is that the use of injunctions could allow the SEP owner to hold up manufacturers and force them to accept exploitative licensing terms. Also in those cases, a prohibitory remedy was sufficient to address the anticompetitive concerns. In the US *Motorola/Google* case, for example, Google entered in a consent order, whereby it agreed to not employ injunctions and exclusion orders against licensees that were willing to agree to licenses on FRAND terms.⁶¹² A similar remedy was adopted in *Bosch*, where the SEP owner agreed to abandon its claims for injunctive relief against its potential licensees.⁶¹³ Also in the EU, Samsung proposed to commit (for a period of five years) not to seek any injunction on the basis of any of its SEPs that relate to technologies implemented in smartphones and tablets, under the conditions that the licensees agree to a specific negotiation framework. This framework consists of: (1) a negotiation period of up to 12 months and (2) if no agreement is reached, a third party determination of FRAND terms by either a court or an arbitrator, as agreed by the parties.⁶¹⁴

The described prohibitory remedies were not difficult to design and administer. They might nonetheless have significant effects on the market, if applied against a licensing practice that had no anticompetitive effect. For example, if the SEP owner had a legitimate reason to depart from a previously made licensing offer, a prohibitory remedy that prevents a departure from such offer might unduly limit the SEP owner's ability to obtain a fair compensation for its SEP.

Similarly, the prohibition to use an injunction against an infringer of a SEP might have negative effects, if applied in inappropriate circumstances. Although the SEP owner might use the injunction opportunistically, as a tool to hold up manufacturers, it is also possible that the SEP owner uses the injunction for a

611 Press Release, Antitrust: Commission welcomes IPCom's public FRAND declaration, MEMO/09/549, (Dec. 10, 2009), *available* at http://europa.eu/rapid/press-release_MEMO-09-549_en.htm.

612 Decision and Order, *Motorola Mobility LLC, and Google Inc.*, 1210120, F.T.C. (Jul 24, 2013).

613 Decision and Order, *Robert Bosch GmbH*, Docket No. C-4377, F.T.C. (Apr 23, 2013).

614 Press Release, Antitrust: Commission Consults on Commitments Offered by Samsung Electronics Regarding Use of Standard Essential Patents, IP/13/971 (Oct. 17, 2013).

legitimate purpose. The SEP owner might use the threat of an injunction as a tool to coerce an unwilling licensee to enter in a licensing negotiation. A remedy that unduly prevents the SEP owner's use of an injunction could distort the negotiation process. An antitrust intervention that unduly limits the SEP owner's ability to obtain an injunction would stimulate free-riding on the side of the manufacturer. At the same time, it would diminish the SEP owner's ability to enforce its SEP in a timely manner. A delay of the SEP owner's compensation might in turn decrease both the SEP owner's ability and incentives to invest in innovation, as well as the willingness to further contribute its technologies to SSOs. Some companies have in fact emphasized that, because of the difficulty in enforcing their SEPs, they have stepped back from the standardization process, by either not joining certain SSOs or not contributing certain technologies to the discussed standards.⁶¹⁵

Therefore, although prohibitory remedies are often perceived as mild, and having limited effects on the market, they might, in some circumstances, deter pro-competitive practices. The enforcer should hence adopt a cautious approach also when imposing prohibitory remedies on SEP owners. In particular, the argument that the imposed remedy is merely prohibitory in nature should not justify the reliance on a low standard of proof. Also prohibitory remedies should be imposed only in cases where evidence shows that the challenged licensing practice has anticompetitive effects on the market.

2.2.B. Access remedies

SEP owner's strategic licensing practices have in some occasions also triggered the adoption of access remedies. In the Rambus case addressed by the European Commission, for example, Rambus offered to put a cap on its royalties, agreeing to charge a royalty of not more than 1.5% for its SEPs.⁶¹⁶ The Commission tested the offered commitments, and, after receiving comments, accepted the commitments and made them binding. However, the EU decision was not uncontroversial. Hynix

615 K. Oglethorpe, Nokia counsel: major companies "willfully infringe" FRAND, Global Competition review, at 2 (June 2013), *available* at <http://globalcompetitionreview.com/news/article/33655/nokia-counsel-major-companies-wilfully-infringe-frand/>.

616 Press Release, Antitrust, Commission Accepts Commitments from Rambus Lowering Memory Chip Royalty Rates, IP/09/1897 (Dec. 9, 2009), *available* at http://europa.eu/rapid/press-release_MEMO-09-544_en.htm.

appealed the commitment decision, arguing that the agreed remedy did not go far enough.⁶¹⁷ At the same time, Hynix brought an action to the ECJ, seeking the annulment of the Commission decision to reject the antitrust complaint brought against Rambus.⁶¹⁸ Both Hynix's actions were however unsuccessful. The Commission rejected the complaint brought by Hynix, maintaining that the remedies offered by Rambus were "adequate to meet the competition concerns expressed in the Statement of Objections."⁶¹⁹ The case in front of the ECJ was on the other hand withdrawn, once Hynix and Rambus solved their disputes through a settlement.⁶²⁰

Designing an access remedy is an onerous task. This is particularly true in the context of SEPs, where the evaluation may require an extensive analysis of variables such as the value of the patent, its contribution to the standard, the value of the standard. A more than 200 pages long decision in the *Microsoft v. Motorola* case (the first court decision defining a FRAND royalty) clearly shows that the determination of access terms is a case-specific, fact-intensive exercise, which requires a detailed analysis.⁶²¹ As of April 2014, courts have not developed yet a generally accepted methodology for the determination of a FRAND royalty.

Further, *Rambus* pointed out that even when similar information is available, enforcers might reach different conclusions on what constitutes a FRAND royalty. It is worth noting that an access remedy was adopted in the US, although Rambus' conduct was challenged under a different theory of harm.⁶²² In both jurisdictions, the adopted remedy imposed on Rambus the duty to license its SEPs on fair and reasonable terms. There was, however, a considerable difference in what the two competition agencies considered a fair royalty. Whereas in the US the royalty imposed on Rambus was less than 0.5%, the commitment adopted in the EU provides for a royalty of 1.5%.⁶²³ Although the competition authorities of both sides of the Atlantic addressed the same

617 Rejection Decision, Case COMP/C-3/38 636 Rambus (Jan. 2010), 54-80.

618 Case T-149/10 Hynix Semiconductor v Commission OJEU 148/42(2010).

619 *Id.* 82.

620 Press Release, Rambus and SK Hynix Sign Patent License Agreement (Jun. 2013), *available at* http://www.rambus.com/us/news/press_releases/2013/130611.html.

621 Findings of Fact and Conclusions of Law, *Microsoft Corp. v. Motorola Mobility Inc.*, Case No. C10-1823JLR, (W.D. Wash. Apr. 25, 2013).

622 See discussion in Chapter VIII; [Remedies for the SEP owner's deceptive conduct](#).

623 Compare: *Rambus Inc. v. FTC*, 522 F. 3d. 456, 462 (D.C. Cir. 2008); Press Release, Antitrust, Commission Accepts Commitments from Rambus Lowering Memory Chip Royalty Rates, IP/09/1897 (Dec. 9, 2009).

conduct, concerning the exact same circumstances, they reached divergent conclusions of what constitutes a fair and reasonable royalty. The divergent conclusions reached by the two competition authorities point out how controversial can be the determination of an access remedy in the SEPs context.

Erroneous decisions on what constitutes a FRAND royalty do not come without costs. On one hand, a remedy that is too lenient, might not address sufficiently the anticompetitive conduct. On the other hand, a remedy that is too strict could affect in a negative way the incentives to invest in innovation, and in the case of SEPs, the incentives to contribute the technology to the standard.⁶²⁴

The difficulty in designing remedies might affect the agency's decision to intervene against the SEP owner's conduct in first place. As explained, under US antitrust law, the difficulty in designing adequate antitrust is often an argument against the antitrust intervention.⁶²⁵ The fact that the imposition of an antitrust remedy is particularly onerous might suggest that the intervention is not desirable in the first place. In the EU, on the contrary, the Commission has often emphasized that the difficulty in defining the adequate remedy does not affect the finding of an antitrust violation. The European Commission can in fact apply various mechanisms that might help in designing the adequate remedy, such as delegate the determination of the remedy to a third party, or a court or a specialized body, which would then determine the adequate licensing fee.⁶²⁶ However, the developments in the context of SEPs shows a different trend. Despite the legal basis for an intervention, the Commission seems to have taken a step back from prosecuting cases where the SEP owner allegedly imposed excessive royalties. Since the Rambus case, the Commission has not initiated any investigation for the imposition of excessive royalties, although such concerns were often raised in private disputes between the SEP owner and licensees. Further, in October 2013, the Commission stated that “[n]ational courts and

624 Bruce Lyons, *The Paradox of the Exclusion of Exploitative Abuse*, CCP Working Paper No. 08-1 (2007).

625 *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 US 398, 415 (2004).

The use of an independent expert opinion has been suggested by the European Commission (EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C(2010) 9274/2, ¶ 290 (2010)).

arbitrators are generally well equipped to do [define what is a FRAND royalty],”⁶²⁷ signaling that disputes over FRAND royalties might be better addressed by courts (as part of private litigation) than by competition authorities. Therefore, it seems that also in the EU, the difficulties in designing an antitrust remedy has influenced the Commission’s willingness to cases concerning the imposition of excessive royalties.

3. THE CONTROVERSIAL EFFECT OF SETTLEMENTS

The analysis of the remedies imposed of SEP owners unveils another important aspect of the antitrust intervention. In most cases, antitrust remedies were adopted through settlements, including EU commitment decisions, US consent orders, and private settlements. Although a settlement of a private dispute is a legitimate decision of the parties in the dispute, one could question whether ending a public antitrust investigation through a commitment decision or a consent order is always a desirable solution as a matter of public policy.

Ending the antitrust legal action through a settlement indeed has several beneficial aspects. Given that there is no need to prove that the challenged conduct constitutes an anticompetitive behavior, the procedure is faster, and requires less administrative resources.⁶²⁸ A settlement allows a more timely adoption of remedies, an aspect that might be particularly valuable in innovative markets, where technological changes are rapid and there is need for quick actions. Both the undertaking under investigation (that is, the SEP owner) and the competition authority have normally strong incentives to reach a settlement, and conclude the case.⁶²⁹ The settlement allows the SEP owner to avoid a lengthy and expensive legal procedure, and the related reputational damages. It also avoids the formal finding of

627 Press Release, European Commission, Antitrust: Commission Seeks Feedback on Commitments Offered by Samsung Electronics to Address Competition Concerns on Use of Standard Essential Patents – Questions and Answers (Oct. 17, 2013).

628 For the EU see: Case C-441/07 European Commission v Alrosa Company Ltd., 2010 ECR. I-05949, ¶ 35 (2010). For the US see: C. F. Phillips, *The Consent Decree in Antitrust Enforcement*, 8 WASHINGTON AND LEE LAW REVIEW 39 (1961).

629 H. hence, Schweitzer, *Commitment Decision under Article 9 of the Regulation 1/2003: The Developing EC Practice and Case Law*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis ed. 2008).

an infringement, which could be used in private damage claims.⁶³⁰ The use of settlements is favorable also for the antitrust authority, given that it does not need to meet the standard of proof required to show the existence of an anticompetitive conduct. There is consequently no need to engage in a full fact finding procedure. The savings of time and money allows the competition authorities to focus on other anticompetitive practices. Another advantage of a settlement is that it allows interested parties to participate in the enforcement action, by providing comments to the suggested remedies.⁶³¹ Particularly when determining complex remedies, public comments may be helpful in evaluating the adequateness of the chosen remedy.

Concluding the antitrust investigation through a settlement has nonetheless also negative aspects. Most importantly settlements do not contribute to the development of clear legal doctrines.⁶³² In the case of a fully prosecuted infringement, there is a clear determination of whether the challenged conduct constitutes an anticompetitive behavior prohibited by competition law. This clarifies the scope competition law provisions have in addressing a specific conduct and contributes to the general deterrence of anticompetitive practices.⁶³³ Settlements, on the contrary, do not determine whether the challenged conduct constitutes a violation of the antitrust provisions. They maintain a substantive level of legal uncertainty, particularly in cases of novel conducts, where the borders of legitimacy have not been yet clearly defined.⁶³⁴ Exactly for this reasons, several commentators have emphasized that

630 In the EU, a commitments decision does not determined the existence of an infringement; hence, parties seeking private damages need to prove the illegality of the SEP owner's conduct. In the US, statements in the settlements are generally not admissible as evidences in subsequent litigations between private parties. (S. Goldfein and T. S. Pak, *Negotiated Antitrust Settlements: Some Perspectives from U.S. Defendants*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis eds. 2008).

631 C. F. Phillips, *The Consent Decree In Antitrust Enforcement*, 8 WASHINGTON AND LEE LAW REVIEW 39 (1961).

632 H. Schweitzer, *Commitment Decision under Article 9 of the Regulation 1/2003: The Developing EC Practice and Case Law*, in EUROPEAN COMPETITION LAW ANNUAL 2008: ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis ed. 2008).

633 J. Fingleton, *The Use of Settlements in Public Antitrust Enforcement: Objectives and Principles*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis ed. 2008).

634 Wagner-Von Papp argues that: "The resulting decrease in infringement decisions breeds further legal uncertainty about what the law demands. This results in an even greater demand for commitment decisions and accordingly fewer infringement decisions. Lacking authoritative statements of the law, undertakings look to previous commitment decisions and non-binding guidelines to estimate the threat points in the bargaining process. This reliance on 'quasi case law' increases the Commission's discretion in future negotiations." F. Wagner-Von Papp, *Best and Even Better Practices in the European*

settlements are generally not appropriate in cases where the application of competition law is unclear.⁶³⁵ Forrester for example points out that some jurisdictions have limited the competition authorities' ability to rely on settlements to cases, where the existence of an anticompetitive concern can be easily identified.⁶³⁶

When antitrust remedies are adopted through settlements, there is also a higher risk that the adopted remedy will deter a pro-competitive practice. Ibáñez Colomo emphasizes that settlements often lack a thorough analysis of the effects the challenged conduct imposes on the market.⁶³⁷ There is consequently the risk that the agreed remedy will stop a conduct that is actually not harmful to consumers. The threat of a long public investigation, with a possible imposition of a substantial fine or damages, may stimulate the incumbent to offer to stop a practice that has no anticompetitive effects.⁶³⁸ Imposing a remedy against a conduct that is not anticompetitive restricts the means through which incumbent competes in the market.⁶³⁹ In such circumstances, the antitrust intervention is likely to harm, rather than protect, competition in the market.⁶⁴⁰

Several of the mentioned concerns fit aptly in the context of SEPs. As shown in the previous chapters, the ability of the antitrust provision to address the SEP owners' conduct remains in many aspects unsettled. And part of the reason why the law

Commitment Procedure after Alrosa: The Dangers of Abandoning the Struggle for Competition Law, 49 COMMON MARKET LAW REVIEW 929-970 (2012) .

635 I. S. Forrester, *Creating New Rules of Closing Easy Cases? Policy Consequences for Public Enforcement of Settlements under Article 9 of Regulation 1/2003*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M.Marquis ed. 2008).

636 *Id.* (The OFT has indicated, for example, that the acceptance of binding commitments is appropriate only where competition concerns are readily identifiable, which would seem to exclude commitments for novel cases.).

637 P. IBÁÑEZ COLOMO, EUROPEAN COMMUNICATIONS LAW AND TECHNOLOGICAL CONVERGENCE (Alphen aan den Rijn ed., Kluwer Law International. 2010).

638 H. Schweitzer, *Commitment Decision under Article 9 of the Regulation 1/2003: The Developing EC Practice and Case Law*, in EUROPEAN COMPETITION LAW ANNUAL 2008 : ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW (C.-D. Ehlermann and M. Marquis ed. 2008).

639 F. Wagner-von Papp, *Best and Even Better Practices in the European Commitment Procedure after Alrosa: The Dangers of Abandoning the Struggle for Competition Law*, 49 COMMON MARKET LAW REVIEW 929-970 (2012).

640 A similar point was made by Commissioner Plat Majors (although referring the settlement in merger cases): "Parties often propose remedies prior to the conclusion of the Division's investigation, which can efficiently save the taxpayers, the parties, and third parties time and expense. But the Division will not accept remedies simply to avoid investigative work. Consumers would not be benefitted if we secured a "scalp" when there was no violation. Indeed, if we do, they could, in fact, be harmed." (Deputy Assistant Attorney General Deborah Platt Majoras, Antitrust Remedies in the United States: Adhering To Sound Principles in a Multi-Faceted Scheme (2002)).

remains unclear can be attributed to the fact that past investigations were often concluded through settlements, without providing clear legal doctrines.

At the same time, it is also possible that some of the agreed remedies deterred a SEP owner's pro-competitive conduct. For example, there is a substantial disagreement in the legal and economic theory on the effects the use of injunctive relief poses on the market. Without a thorough evaluation it is unclear whether in the concrete case the conduct was anticompetitive. It is thus possible that the agreed remedy prohibited a licensing practice that was actually pro-competitive.

Finally, remedies agreed through settlements might also not have the desired deterrent effects. They do not provide for a monetary sanction (in the EU), nor they enable private parties the ability to recover damages. There is consequently the risk that the antitrust intervention will not sufficiently deter future SEP owners' anticompetitive practices.

These criticisms certainly do not imply that the legal actions brought against SEP owners should never be solved through settlements. They nonetheless indicate that competition authorities should be cautious in selecting cases they are willing to settle. The decision should be taken in light of the possibility of stopping a pro-competitive practice, the need for legal clarity, and the need to deter future anticompetitive practices.

4. CONCLUSION

The analysis has shown that the SEP owners' opportunistic practices have triggered the application of both prohibitory and access remedies. The determination of an access remedy might be nonetheless particularly onerous in the context of SEPs. As shown by cases as *Rambus* and *Microsoft v Motorola*, it might be very difficult to determine what constitutes a FRAND royalty. It should hence come as no surprise that competition authorities, particularly in the US, have mainly focused their intervention to conducts that do not require the imposition of an access remedy.

The analysis has also shown that although prohibitory remedies are easier to design and administer, they might have negative effects on the market, if applied

incorrectly. Those concerns are less strong in cases challenging the SEP owners' deceptive practices. Deceptive practices have no pro-competitive effects and there are consequently less concerns that the imposed antitrust remedy will deter a conduct that is beneficial for consumers. The situation is different in cases that challenge the SEP owner's licensing practices, such as the request for an injunction, where there is a disagreement concerning the actual effect the SEP owner's conduct might have on the market. Particularly where the remedy is adopted through a settlement, without a thorough evaluation of the actual effects the challenged conduct imposes on the market, there is a risk that the imposed remedy will deter a pro-competitive conduct.

The analysis also shows that the adoption of an antitrust remedy through a settlement is not always an optional solution. Although solving an antitrust investigation through a settlement allows the competition authority to address the anticompetitive concerns related to the SEP owner's conduct in a timely manner, settlements might have also some negative consequences. On one hand, they maintain a significant level of legal uncertainty, given that they do not clarify the exact scope the antitrust provisions have in addressing the SEP owner's conduct. At the same time, because of the absence of a detailed analysis of the effects the challenged conduct has on the market, remedies agreed to in a settlement might stop a practice that has no anticompetitive effects.

MECHANISMS PREVENTING DISPUTES IN THE SEP CONTEXT: THE INFORMAL ANTITRUST INTERVENTION

The analysis presented in the previous chapters demonstrates that competition law is not able to provide a complete solution to the problems arising in the context of SEPs. Some conducts, although opportunistic, falls outside the domain of competition law. Others, provide the basis for an intervention, but such intervention remains controversial. The limitations competition law faces in addressing opportunistic practices in the context of SEPs suggest that mechanisms outside the sphere of competition law need to complement the antitrust intervention.

Competition authorities on both sides of the Atlantic have devoted considerable attention in discussing mechanisms that could mitigate disputes related to SEPs. They have organized workshops, conferences, issued recommendations and policy papers with the general goal of promoting mechanisms that would mitigate the risk of opportunisms related to SEPs. As it will be explained, however, the approaches the competition authorities adopted in the two jurisdictions differs in several aspects. The aim of the chapter is not to provide a complete overview of the adopted mechanisms, but rather to assess what role competition law plays (and should play) in stimulating the implementation of those mechanisms. Should competition law be used as a tool to stimulate the adoption of mechanisms that could avoid opportunistic practices in the context of SEPs?

The chapter is structured as follows. First, the chapter discusses the actions competition authorities have taken in stimulating the revision of SSOs' rules. Next, the chapter evaluates the steps competition authorities have taken in promoting the *ex ante* discussion of licensing terms for SEPs. Further, the chapter evaluates the approaches competition authorities adopted with respect to the judicial remedies available to SEP owners. In conclusion, the chapter evaluates the role competition law should play in stimulating the adoption of further mechanisms that could address opportunistic practices in the context of SEPs.

1. REVISION OF THE SSOs' RULES

Both EU and U.S. competition authorities emphasized the importance SSOs' rules play for the well-functioning of the standardization process. They noted that SSOs' rules ensure that the pro-competitive effects on the standardization process are preserved, and that competition is not unduly restrained.⁶⁴¹ The competition authorities of the two jurisdictions nonetheless adopted different approaches when stimulating SSOs to revise their internal rules in a way to avoid opportunistic conducts that might arise in the SEPs context.

1.1. *The EU approach toward SSOs' rules*

In the EU, the Commission used its soft law mechanisms to stimulate SSOs to adopt specific procedural safeguards that could prevent opportunistic practices in the context of SEPs. Already 2001, the Commission issued the *Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation Agreements* (2001 Guidelines),⁶⁴² a document that discussed, *inter alia*, the applicability of competition law provisions—mainly Article 101 TFEU—to standardization agreements. The document did not have a binding nature. It nonetheless aimed at stimulating SSOs to adopt procedural provisions that would avoid anticompetitive practices related to the adoption of the standard. The rationale for such recommendations was the following. A standardization agreement represents an agreement between market players—often horizontal competitors—concerning their future conduct in the market. It necessarily limits competition in the market and would, in principle, fall under the prohibition of Article 101(1) TFEU (at the time Article 82 EC)—the provision prohibiting anticompetitive agreements. Economic theory has recognized, nonetheless, that standards can have substantial pro-competitive effects which are consistent with the goals of competition law. As a result, competition authorities have allowed standard-setting activities, on the condition they

641 For EU see: Commission Communication Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, O.J. C 11/1, ¶268 (2010) ; For the US see: U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 42-48 (2007).

642 EUROPEAN COMMISSION, Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation Agreements, C 3/2 2001/C 3/02, ¶ 163 (2001).

are conducted through a procedure that permits the preservation of the pro-competitive effects of standardization, and avoids unnecessary limitations to competition.⁶⁴³ The 2001 Guidelines suggested the procedural rules SSOs should adopt to preserve the pro-competitive effect of the standardization agreement, and in this way, avoid that the agreement would be considered anticompetitive (and thus void) under Article 101 TFEU.

At the time of the adoption of the 2001 Guidelines, the main concerns with the standardization activities were collusion among SSO's participants, and their ability to use the standard as a tool to foreclose third parties from the market.⁶⁴⁴ The Commission consequently tried to stimulate the adoption of rules that would reduce the risk of collusion and foreclosure. The 2001 Guidelines provided that standardization agreements that have a legitimate object do not fall under Article 101 TFEU, if they meet specific procedural requirements.⁶⁴⁵ First, the standardization agreement must be determined through an unrestricted and transparent standardization procedure, and the SSO must not impose an obligation on participants to comply with the standard.⁶⁴⁶ Further, the 2001 Guidelines clarified that in cases where the standard becomes a *de facto* standard

[t]he main concern will . . . be to ensure that th[e] standar[d] [is] as open as possible and applied in a clear non-discriminatory manner. To avoid elimination of competition in the relevant market(s), access to the standard must be possible for third parties on fair, reasonable and non-discriminatory terms.⁶⁴⁷

The openness and the transparency of the standardization procedure aimed to ensure that no company would be arbitrarily excluded from the standardization process, whereas an open access to the standard aimed preventing third party foreclosure.

⁶⁴³ *Id.* at 163.

⁶⁴⁴ *Id.* at 174-175.

⁶⁴⁵ On the contrary, the 2001 Guidelines emphasized that standardization activities that are part of a broader practice that aims at excluding actual or potential competition constitute a clear antitrust violation, and is thus prohibited (*Id.* at. 165).

⁶⁴⁶ *Id.* at 163.

⁶⁴⁷ *Id.* at 174.

The Commission assumed that when the SSO implemented the suggested procedural requirements, there was a lower risk that SSO members could use the standard setting activities as a tool for collusion or foreclosure. There was consequently a legal presumption that the standardization agreement was not in violation of Article 101 TFEU. On the contrary, the legality of agreements adopted by an SSO which internal rules did not meet the procedural requirements determined in the 2001 Guidelines was evaluated on a case by case basis. Therefore, the threat of a competition law scrutiny was used as a tool to stimulate SSOs to implement the procedural requirements suggested in the 2001 Guidelines.

In response to cases of patent ambush and patent holdup that arose in the years after the adoption of the 2001 Guidelines, the Commission issued revised guidelines in 2011 – the *Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements* (the 2011 Guidelines).⁶⁴⁸ The 2011 Guidelines confirmed the principles outlined in the old document, but addressed concerns related more specifically to SEPs. They clarified that the implementation of patented technologies in an industry standard is generally pro-competitive.⁶⁴⁹ The Commission however emphasized that the SSO needs to ensure effective access to the standard, by adopting a clear and balanced IPR policy, which “increases the likelihood that the implementers of the standard will be granted effective access to the standards elaborated by the [SSO].”⁶⁵⁰

The 2011 Guidelines clarified that the SSO can promote the access to its standards through two main pillars. First, the SSO’s policy should require participants to make a good faith disclosure of the IPRs that might be relevant for the discussed standard.⁶⁵¹ At the same time, the 2011 Guidelines suggested that SSOs should adopt an IPR policy that demands a participant wishing to have its IPR included in the standard to irrevocably commit to make its technologies available on FRAND terms.⁶⁵² Further, the Guidelines suggested that the FRAND commitment

648 EUROPEAN COMMISSION, *Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements*, 2011 O.J. C 11/1 (2010).

649 *Id.* at 269.

650 *Id.* at 284.

651 *Id.* at 268.

652 *Id.* at 285.

should be binding even for companies to which SEPs are transferred at the later stage, that is, after the patented technology has been implemented in the standard.⁶⁵³

Although the industry applauded the adoption of the 2011 Guidelines, one could question whether the Commission did not go too far in defining the procedural rules that an SSO needs to be met in order to avoid a liability under Article 101 TFEU. The general role of the guidelines is to provide directions regarding the way in which the Commission intends to interpret and apply EU competition law, and in this way increase transparency and ensure consistency in the application of the competition law provisions.⁶⁵⁴ The conditions of the safe harbor seem to nonetheless go beyond such intention. It seems that the Commission tried to use the guidelines as a tool to stimulate SSOs to adopt specific internal rules, a task that one would expect to be done by a legislator, but not by a competition authority.

The Commission nonetheless explicitly emphasized that SSOs remain free to adopt internal rules different from the one suggested in the 2011 Guidelines. The Guidelines itself clarified that “[t]he non-fulfillment of any or all of the principles set out in this section will not lead to any presumption of a restriction of competition within Article 101(1).”⁶⁵⁵ When the SSO’s rules do not meet the requirement of the safe harbor, the legality of standardization agreement is evaluated on case by case basis, by analyzing the effects the agreement imposes on the market.⁶⁵⁶ In other words, the SSOs can adopt different procedural rules than the one suggested in the 2011 Guidelines. However, in this case, the antitrust analysis will evaluate whether the adopted rules allowed an informed choice between technologies competing for the implementation in the standard.⁶⁵⁷ Recognizing the SSO’s ability to adopt different rules than the one suggested in the 2011 Guidelines indeed lessens the concerns that the Commission used the guidelines as a tool to “regulate” the standardization process.

⁶⁵³ *Id.* at 280.

⁶⁵⁴ On Commission’s use of guidelines see: P. LAROCHE, COMPETITION LAW AND REGULATION IN EUROPEAN TELECOMMUNICATIONS, (Hart Publishing 2000); B. EGELUND OLSEN & K. ENGSIG SØRENSEN, REGULATION IN THE EU (Thomson Sweet & Maxwell. 2006); H. A. Cosma and R. Whish, *Soft Law in the Field of EU Competition Policy*, 14 EUROPEAN BUSINESS LAW REVIEW 1 (2003).

⁶⁵⁵ EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, 2011 O.J. C 11/1 (2010), ¶279, 298.

⁶⁵⁶ *Id.* at 279.

⁶⁵⁷ *Id.* at 298.

It is also worth noting that after the adoption of the 2011 Guidelines, the Commission did not initiate any procedure against an SSO for the failure to implement specific procedural requirements. In 2005, the Commission signaled a possible intervention against ETSI, which, in the Commission's view, did not adopt internal rules that would sufficiently protect against the risk of patent ambush.⁶⁵⁸ The Commission closed the investigation following ETSI's change in the procedural rules, which strengthen the requirement for an early disclosure of essential patent rights. Since the adoption of the 2011 Guidelines, Commission has not brought any case against an SSOs for the failure to adopt an adequate IP policy. This suggests that although the Commission has tried to use competition law to stimulate SSOs to adopt specific procedural requirements, it does not intend to hold SSOs liable for every opportunistic practice that might arise in the standardization context.

1.2. The U.S. approach toward SSOs' rules

U.S. competition authorities adopted a less interventionist approach towards SSOs' rules than their EU counterpart. The U.S. Supreme Court ruled that a private standard setting activity is permitted under the antitrust laws "only on the understanding that it will be conducted in a nonpartisan manner offering procompetitive benefits."⁶⁵⁹ It nonetheless also emphasized that standardization activities of SSOs that do not have specific procedural requirements do not necessarily infringe antitrust law. The Supreme Court explained that

the absence of procedural safeguards can in no sense determine the antitrust analysis. If the challenged concerted activity of [an association's] members would amount to a per se violation of § 1 of the Sherman Act, no amount of procedural protection would save it. If the challenged action would not amount to a violation of § 1, no lack of procedural protections would convert

⁶⁵⁸ Europa Press Release, Commission Welcomes Changes in ETSI IPR Rules to Prevent 'Patent Ambush', IP/05/1565 (Dec. 2005).

⁶⁵⁹ *Allied Tube & Conduit Corp. v. Indian Head, Inc.* 486 U.S. 492, 506-07 (1988).

it into a per se violation because the antitrust laws do not themselves impose . . . a requirement of process.⁶⁶⁰

The legality of the standardization agreement is thus evaluated under the “rule of reason”, by analyzing the effects the agreement imposes on the market. The absence or presence of specific procedural requirements can in no way predetermine the outcome of such analysis.

It should consequently come as no surprise that the U.S. antitrust agencies have been more hesitant in suggesting to SSOs the implementation of specific procedural rules. The DOJ and the FTC did issue several documents addressing the problem of deceptive practices and holdup in the standard setting context. However, they did not issue a document comparable to the 2001 and 2011 Guidelines adopted in the EU.

Some commentators have suggested that U.S. antitrust agencies should adopt a stricter approach towards SSOs. The American Antitrust Institute (AAI) for example submitted a petition to the FTC and the DOJ entitled “Request for Joint Enforcement Guidelines on the Patent Policies of Standard Setting Organizations”⁶⁶¹ in which it urged the two antitrust agencies to step up their enforcement of the antitrust laws with respect to SSOs themselves. To that end, the AAI suggested the FTC and the DOJ to (1) issue specific guidelines for what should be included in SSO patent policies, and (2) hold SSOs liable for not adopting procedural safeguards to prevent patent holdup behavior. The AAI suggested the adoption of very specific rules. First, it suggested that SSOs should provide a mandatory disclosure of relevant patents (including anticipated and pending patent applications), supported by good faith reasonable inquiry (in contracts with disclosure in good faith currently required by most SSOs).⁶⁶² Second, the AAI suggested that SSO’s rules should mandate a royalty-free license for patents that are not disclosed during the standardization process.⁶⁶³

660 *Northwest Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co.*, 472 U.S. 284, 293 (1985).

661 American Antitrust Institute (AAI), *Request for Joint Enforcement Guidelines on the Patent Policies of Standard Setting Organizations* (May 2013), [hereinafter AAI Request for Joint Enforcement Guidelines] [available at: http://www.antitrustinstitute.org/~antitrust/sites/default/files/Request%20for%20Joint%20Enforcement%20Guidelines%20on%20the%20Patent%20Policies%20of%20Standard%20Setting%20Organizations.pdf](http://www.antitrustinstitute.org/~antitrust/sites/default/files/Request%20for%20Joint%20Enforcement%20Guidelines%20on%20the%20Patent%20Policies%20of%20Standard%20Setting%20Organizations.pdf).

662 *Id.* at 13.

663 *Id.* at 14.

Third, SSOs should require that participants commit to license their SEPs on RAND terms, with a RAND royalty reflecting “a patent’s incremental value to the standard before adoption and commercialization”—the so-called “ex ante” value of the patent.⁶⁶⁴ Fourth, the AAI suggested that SSO’s rules should prohibit the use of injunctions and exclusion orders against any willing licensee infringing a SEP. Fifth, the AAI suggested that the SSOs provides for an efficient, cost-effective process to resolve disputes over RAND royalty and non-royalty terms (for example, a baseball-style arbitration).⁶⁶⁵

Therefore, the AAI’s proposal suggested that U.S. antitrust agencies should adopt a similar approach as the one adopted in the EU, where the competition authorities use the threat of an antitrust liability as a tool to stimulate SSOs to adopt specific procedural rules. However, the rules suggested by the AAI were much more detailed than those found in the EU. The AAI suggested that the antitrust agencies should adopt also a stricter approach towards SSOs than the one adopted in the EU, and considered them liable if they fail to adopt rules that would adequately prevent the SEP owner’s opportunism. As of April 2014, however, U.S. antitrust agencies did not adopt an official position toward the suggestions, and did not initiate any formal procedure against an SSO that has failed to adopt rules that would prevent participants’ opportunistic practices.

One could also question whether the unilateral conduct of a SEP owner could truly trigger the liability of the SSO. The AAI argument is clear. The SEP owner’s opportunistic practice returns the standardization agreement to its anticompetitive status, and could thus trigger the SSO’s antitrust liability. However, can the SSO be held liable for the unilateral conduct of one of its members?

The issue was partially discussed in the *American Society of Mechanical Engineers v Hydrolevel*, where the Supreme Court found the SSO liable for the anticompetitive conduct of its agent.⁶⁶⁶ The American Society of Mechanical Engineers, Inc. (ASME) was a nonprofit SSO, which *inter alia* promulgated and published standards for heating boilers. McDonnell & Miller, Inc. (M&M) was the leading company in the market for low-water fuel cutoffs. M&M’s vice president, was

⁶⁶⁴ *Id.*

⁶⁶⁵ *Id.* at 15.

⁶⁶⁶ *American Society of Mechanical Engineers v Hydrolevel Corp.*, 456 US 556 (1982).

also an agent of the ASME, more precisely a chairman of one of ASME's subcommittees. The vice president allegedly used its position at ASME to harm the ability of other companies to compete with M&M. He did so, by replying in the name of ASME to a public inquiry concerning one ASME's standards, and providing a deceptive interpretation of that standard. The Supreme Court found the SSO liable for its agent's conduct. It emphasized that by imposing civil liability on the SSO for the antitrust violations of its agents acting with apparent authority, "it is much more likely that similar antitrust violations will not occur in the future. Only ASME can take systematic steps to make improper conduct unlikely."⁶⁶⁷ The Supreme Court concluded that

a rule that imposes liability on the standard-setting organization—which is best situated to prevent antitrust violations through the abuse of its reputation—is most faithful to the congressional intent that the private right of action deter antitrust violations.⁶⁶⁸

The *Hydrolevel* decision thus confirmed that the SSO can be held liable for the conduct of its members.⁶⁶⁹

However, the decision is not necessarily applicable to all situations in the standardization context. In *Hydrolevel*, the Supreme Court relied upon general principles of principal agent relationship when determining the SSO's liability. The case did not concern only a membership in an SSO, but a situation where the person engaging in the anticompetitive practice acted under the SSO's authority—in its name (although for the benefit of its employer). *Hydrolevel* thus might not apply to the

⁶⁶⁷ *Id.* at 572.

⁶⁶⁸ *Id.* at 573.

⁶⁶⁹ The possibility to hold an SSO liable for the anticompetitive conduct of its participant was recently confirmed also in the *TruePosition, Inc. v. LM Ericsson Telephone Co.* TruePosition alleged that Ericsson, Qualcomm Inc., and Alcatel-Lucent USA, abused their positions of authority within an SSO, by violating its rules and procedures in order to conspire to exclude the TruePosition's technology from the 4th generation ("4G") global standard for mobile telecommunications technologies. TruePosition argued that such conspiracy constituted a violation of Section 1 of the Sherman Act. The company brought an action against SSO, noting that the three companies acted under the authority of SSO as Chairmen and a Vice Chairman of key subcommittees in order to manipulate the standardization process. TruePosition alleged that the fact that the three companies acted as agents of the SSO makes the *Hydrolevel* judgment directly applicable. The court agreed, finding that the Complaint plausibly alleges that the SSO joined the alleged conspiracy (*TruePosition, Inc. v. LM Ericsson Telephone Co.*, 899 F.Supp.2d 356 (ED Penn. 2012)).

standardization context where participants do not act in the name of the SSO. Consequently, a mere participation in an SSO might be not sufficient to prove a principal-agent relationship, and absent such relationship, it might be difficult to prove the SSO's responsibility for the SEP owner's conduct.

It is worth noting that, despite the absence of an intervention on the side of competition authorities, also U.S. SSOs have adopted procedural safeguards similar the one suggested in the EU guidelines. Several reasons explain the SSOs' voluntary implementation of such procedural rules. First, an SSO willing to develop a standard that can be referred by U.S. public agencies (for example in a regulation) needs to comply with specific procedural requirements. These requirements are determined in the Standards Development Organization Advancement Act,⁶⁷⁰ and in the OMB Circular A-119. The two documents provide, *inter alia*, that an SSO should ensure that the technology owner makes its IPR available on a non-discriminatory, royalty-free or reasonable royalty basis to all interested parties. Only the standards adopted by SSOs that comply with such procedural requirements can be referred by the public authorities in their legislation. Hence, the U.S. government—in the role of the SSOs' customer—imposed on the SSOs the obligation to respect specific requirements, if they wish their standards to be referred by public agencies.

Second, an SSO that wants to obtain the accreditation from American National Standards Institute (ANSI) is encouraged to implement specific procedural rules. This includes requirements of due process, openness of the standardization procedure, and consensus.⁶⁷¹ ANSI also encourages SSOs to adopt a policy that invites participants to

670 The Guidelines for Collaborations among Competitors, later amended by the Standards Development Organization Advancement Act (SDOAA), discussed the applicability of antitrust law to SSOs that develop standards to which public agencies refer to in the regulation. The increasing reliance of public agencies on standards developed by private SSOs was perceived as having unfairly increased the potential liability of those SSOs. Such liability was consequently reduced through the adoption of the SDOAA, which clarifying that activities of SSOs will be evaluated under the rules of reason. At the same time, it also limited the antitrust liability of SSOs to actual, as opposed to treble, damages. In order to benefit from the limited liability, however, the SSO must file a proper notification with the FTC, and must comply with the due process requirements described in OMB Circular A-119. This requires that the standardization process is based on a principles of openness, balance of interests, due process, appeal process and consensus, and require IP owners to make their rights available on non-discriminatory, royalty-free or reasonable royalty basis to all interested parties.(Standards Development Organization Advancement Act amend. 118 Stat. 661 ANTITRUST DIVISION DEPARTMENT OF JUSTICE, Justice Department Implements the Standards Development Organization Advancement Act of 2004 (2004).

671 American National Standards Institute (ANSI), Essential Requirements: Due Process Requirements for American National Standards (2006) [hereinafter ANSI Essential Requirements],

disclose whether they hold any relevant patents, and in the case they do, to clarify whether they are willing to license their patented technologies on reasonable terms.⁶⁷² SSOs are not required to obtain ANSI's accreditation and implement the suggested rules. However, market forces often stimulate them to do so. In fact, SSOs accredited by ANSI are the primary source of many U.S. standards. The accreditation has hence a market value, given that it allows the SSO to signal a reliability and quality of its standards.

Third, evidence shows that also SSOs that are not accredited by ANSI often comply with the suggested procedural requirements.⁶⁷³ Updegrove explains that in the late 1980s, in the information technology industry, there was an increasing number of SSOs that operated in the information technology industry and followed a model similar to the one promoted by ANSI, although these SSOs did not require accreditation. Those SSOs often complied with procedural requirements that are as stringent as the one required to obtain ANSI accreditation. A voluntary adherence to procedural requirements confirms that SSOs have a self-interest to adhere to the suggested procedural requirement. Compliance can represent a tool to signal to the market the credibility and reliability of the SSO, and thus facilitate the development of successful, widely implemented standards.

In sum, although U.S. competition authorities adopted a less interventionist approach in stimulating the revision of the SSO's' rules, U.S. SSOs have adopted similar procedural requirements as the SSOs based in the EU.

1.3. Did competition law have a role in the revision of SSOs' rules?

A review of the recent developments in the SEPs context shows that most SSOs have adopted procedural rules that mitigate the risk that companies will engage in opportunistic practices while participating in the standardization process. For example, SSOs have adopted clear disclosure policies, which require the participants in the standardization process to disclose *ex ante* the existence of any patent and

available at http://www.asce.org/uploadedFiles/Codes_and_Standards_-_New/ansiessential06updates.pdf.

⁶⁷² *Id.* at § 3.1.

⁶⁷³ A. Updegrove, Chapter 8: Creating a Standard Setting Organization Technical Process, § III, *in* The Essential Guide to Standards, *available at* <http://www.consortiuminfo.org/essentialguide/creating.php>.

patent application that might be relevant for the discussed standard.⁶⁷⁴ The obligation to disclose up front the patent interest increases the transparency of the standardization process, allowing participants to make an informed choice about the technologies to be implemented in the standard.⁶⁷⁵ Further, precise disclosure rules avoid cases as Rambus, where it was not clear whether participants had to disclose only granted patents or also patent applications and other forms of patent interest.

SSOs have also adopted rules that require the participant to clarify whether it is willing to license its patents under specific terms (generally FRAND terms), if implemented in the standard.⁶⁷⁶ A FRAND commitment facilitates an open access to standard. In the absence of such commitment, a SEP owner would have a statutory right to refuse to license its SEPs, and could thus prevent the access to the standard. Further, some SSOs have adopted a “general FRAND commitment,” a commitment through which the participant offers to license on FRAND terms any of its patented technologies implemented in the standard, regardless of whether it was disclosed during the standardization process.⁶⁷⁷ As a result, any patent implemented in the standard is subject to the FRAND commitments, irrespectively from whether the existence of the patent has been disclosed during the standardization process.

Finally, most SSOs also included a rule concerning the transferability of the FRAND commitment. According to this provision, when the SEP owner transfers a FRAND-encumbered patent to a new entity, the latter is bound by the FRAND commitment given by the previous SEP owner.⁶⁷⁸ This provision addresses cases such as N-Data and IPRCom, where it was not clear whether the new SEP owner was bound by the FRAND commitment made by the previous SEP owner.

674 *See, e.g.*, VMEbus International Trade Association (VITA), VSO Policies and Procedures, § 10.1 (Nov. 2009), *available at* <http://www.vita.com/home/VSO/vso-pp-r2d6.pdf> [hereinafter VITA internal policy]; Joint Electron Device Engineering Council (JEDEC), JEDEC Manual of Organization and Procedure, § 8.2. (Nov. 2011) [JEDEC internal policy]; European Telecommunication Standard Institute (ETSI), Annex 6: ETSI Intellectual Property Rights Policy (Mar. 2013), *available at* <http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf> [ETSI internal policy].

675 *Id.* at 286.

676 *See, e.g.*, VITA internal policy at § 10.3; JEDEC internal policy at § 8.2.4; ETSI internal policy at § 6.1.

677 *See, e.g.*, International Telecommunication Union (ITU) Guidelines for Implementation of ITU-T Patent Policy, § 2.5 (June 2002), *available at* <http://www.itu.int/en/ITU-T/ipr/Pages/revpatent.aspx> [ITU internal rules]; ETSI internal policy at § 6.2. (referring to a patent family).

678 *See, e.g.*, ETSI internal policy at § 6.1bis.

Therefore, subsequent to the disputes that arose in the context of SEPs, most SSOs revised their internal rules in a way to mitigate the risk of opportunistic practices. However, was the revision of the rules stimulated by the antitrust intervention? Were the adopted of new SSOs' rule stimulated by the issuance of documents, such as the Commission's 2011 Guidelines? Would we observe a similar development even in absence of the antitrust intervention?

There is unfortunately no clear cut answer to these questions. Indeed, one could argue that the antitrust actions initiated by the competition authorities against SEP owners, coupled with the Commission's Guidelines, did point out at the deficiencies of the SSOs' rules and did stimulate SSOs to revise them. A different explanation is however also possible. SSOs have an interest in adopting clear procedural rules. Avoiding participants' deceptive practices allows the SSO to make an informed selections of the technologies to be implemented in the standard, and thus select a standard of a higher quality. Further, FRAND commitments ensure that the standard will be accessible to all parties interested in the implementation of the standard. Developing a successful standard is clearly in the interest of the SSOs, given the more successful the standard is, the more profit will the SSO normally generate. In other words, SSOs had a clear interest in revising the rules in a way to avoid opportunisms. It is therefore possible that the revision of the SSOs' rule would have occurred even in absence of an antitrust intervention. The U.S. experience supports this suggestion. In the United States, in fact, SSOs have adopted similar procedural requirements as the one applied by SSOs in the EU, although there was not intervention of the side of the competition authorities. It is thus possible that the competition authorities' intervention did not have a major role in stimulating the revision of the SSOs' rules.

Surprisingly, SSOs did not adopt any mechanism to address the SEP owner's ability to impose exploitative licensing practices. Rather the contrary. SSOs generally state that any dispute concerning the licensing terms should be solved between the parties of the licensing agreement, outside the standardization context.⁶⁷⁹ SSOs did

⁶⁷⁹ See, e.g., ITU internal rules § 6.3 ("ITU should not engage in settling disputes on patent rights; this should be left - as in the past - to the parties concerned. This viewpoint is reaffirmed by the fact that none of the standardization organizations which use a similar code of practice as the ITU have departed from this principle."). The only exception is VITA, an SSO which has adopted an internal dispute resolution mechanism, through which parties can solve their disagreement regarding FRAND terms. VITA internal policy at § 10.5.

also not adopt any mechanisms to address the risk of royalty stacking, or provisions that would prohibit the SEP owner to use injunctions against infringers of SEPs.⁶⁸⁰

What is the reason for the SSOs' failure to adopt mechanisms that would address the SEP owner's ex post opportunism? One argument could be that the SSO's incentives are not aligned with those of consumers, and that the SSO has consequently no interest in adopting such mechanisms. Cases of patent holdup harm consumers, if exploitative licensing conditions are passed on them. However, the SSO does not necessarily have an incentive to prevent consumers' harm. A different explanation is nonetheless also possible. One could argue that cases of patent holdup are not that frequent in practice, and that there is consequently no need for the SSO to intervene. SSOs are business entities, driven by a clear business goal: develop successful standards which are widely implemented by the market. It is thus reasonable to expect that the SSO would address practices that harm the success of the standard. The fact that SSOs did not take any action in relation to cases of alleged patent holdup suggests that, in practice, cases of patent hold up (if they arise at all) did not have a significant effect on the standards' success.

In sum, although SSOs' have revised their internal rules in a way that decreases the possibility of opportunistic practices, it remains unclear whether such changes have been stimulated by the intervention of the competition authorities. SSOs have a clear interest in preventing deceptive practices that could harm the success of the standard, and are consequently interested in adopting adequate procedural rules, even in absence of an antitrust stimulus.

680 SSOs' internal rules do generally *not* provide that by making a FRAND commitment the SEP holder waves its right to seek an injunction in cases of infringement. ETSI discussed the possibility to implement in its internal policy a prohibition to seek an injunction for FRAND encumbered patent. The Interim IPR policy adopted in 1993 limitation to the SEP holder's use of injunctions. This provision was however later excluded from the policy adopted in 1994, and, to this day, it has not been implemented again. (See: R. G. Brooks & D. Geradin, *Taking Contracts Seriously: The Meaning of the Voluntary Commitment to Licence Essential Patents on "Fair and Reasonable" Terms*, in INTELLECTUAL PROPERTY AND COMPETITION LAW: NEW FRONTIERS (Steven Anderman & Ariel Ezrachi ed., 2011)).

2. *EX ANTE* DISCUSSION OF LICENSING TERMS

The concerns with patent holdup have stimulated competition authorities to change their approach towards the discussion of licensing terms during the standardization process. Competition authorities were traditionally suspicious toward the discussion of licensing terms, because of the risk of collusion. As a result, SSOs have generally prohibited participants to discuss the licensing terms during the standardization process. The licensing terms have to be determined in bilateral negotiations between the SEP owner and the manufacturer, outside of the standardization process.

With time, however, competition authorities recognized that allowing the discussion of the licensing terms for SEPs *ex ante* could mitigate the risk of patent holdup. They recognized that if participants revealed the exact licensing terms for their technologies during the standardization process, the SSO would be able to base the selection of the technology both on quality and price.⁶⁸¹ An *ex ante* determination of licensing terms would also avoid the risk of *ex post* opportunism, preventing the SEP owner to hold up the licensee and demanding unfair royalties after the licensees are locked-in the use of the SEPs.⁶⁸² Competition authorities have thus announced their willingness to adopt a more flexible approach toward the discussion of licensing terms during the standardization process.

Competition authorities were particularly supportive towards SSOs' rules that would allow participants to make an *ex ante* unilateral declaration of the licensing terms. In the EU, the Commission clarified this position in the 2011 Guidelines, where it maintained that a technology owner is authorized to reveal the maximum level royalty that it intends to charge for the use of its SEP.⁶⁸³ The DOJ and the FTC expressed a similar position in the 2007 document *Antitrust Enforcement And Intellectual Property Rights: Promoting Innovation and Competition*, where they suggested that a *voluntary* and *unilateral* disclosure of its licensing terms, including

681 EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, 2011 O.J. C 11/1, ¶ 299 (2010).

682 U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 49 (2007).

683 EUROPEAN COMMISSION, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, 2011 O.J. C 11/1, ¶ 299 (2010).

royalty levels, will generally not trigger the application of Section 1 or Section 2 of the Sherman Act.⁶⁸⁴ The two agencies clarified that the *ex ante* negotiations of licensing terms will be analyzed under the rule of reason, evaluating whether the restraints imposed by the negotiation are likely to have anticompetitive effects and, if so, whether the restraints are reasonably necessary to achieve pro-competitive benefits that outweigh those anticompetitive effects.⁶⁸⁵

The DOJ confirmed this approach in two business review letters.⁶⁸⁶ The first letter concerned the IP policy of VMEbus International Trade Association (VITA), which imposed on its members the duty to state the maximum (and most restrictive) royalty rate for its patents that could be implemented in the standard.⁶⁸⁷ The second letter referred to International Electrical and Electronics Engineers, Inc. (IEEE) policy, which unlike VITA, provided that members could, but were not forced to, declare the maximum royalty rates and most restrictive licensing terms. In both occasions, the DOJ recognized that *ex-ante* consideration of licensing terms can be pro-competitive, and thus concluded that the policies suggested by the two SSOs would not be considered anticompetitive.⁶⁸⁸

Competition authorities maintained a less permissive approach towards a *collective* discussion of licensing terms. In the EU, the Commission has made clear that it remains unfavorable to any form of collective negotiation of royalties.⁶⁸⁹ On the other hand, the U.S. antitrust agencies indicated that a collective negotiation would not be considered as a *per se* violation, but evaluated under the rule of reason. The

684 U.S. D.O.J. & F.T.C., ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 54 (2007).

685 *Id.* at 16.

686 A business review letter is the DOJ's response to a request of a private party to clarify the enforcement intentions relative to the party's proposed conduct. They reflect the enforcement positions of the antitrust agency and are based on the existing case law and the current economic thinking of the authority. Business review letters are however not binding upon the courts. (For a general discussion see: L. E. Barrows, *Why The Enforcement Agencies' Recent Efforts Will Not Encourage Ex Ante Licensing Negotiations In Standard-Setting Organizations*, 89 TEXAS LAW REVIEW 967(2011)).

687 Letter from Thomas O. Barnett, Assistant Attorney General, U.S. DOJ, to Robert A. Skitol, 2006 [hereinafter VITA Business Review Letter] available at <http://www.justice.gov/atr/public/busreview/219380.pdf>.

688 Letter from Thomas O. Barnett, Assistant Attorney General, U.S. DOJ, to Michael A. Lindsay (Apr. 2007), [hereinafter IEEE Business Review Letter], available at <http://www.justice.gov/atr/public/busreview/222978.htm>.

689 Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, 2011 O.J. C 11/1, ¶ 299 (2010) (presenting a favorable approach only to the unilateral disclosure of licensing terms).

DOJ emphasized that also joint negotiations of licensing terms could have pro-competitive effects, given that they could, *inter alia*, mitigate the risk of holdup.⁶⁹⁰ In the view of the DOJ, an *ex ante* joint negotiation of the licensing terms could reduce uncertainty over the licensing terms, decrease ex post litigation, prevent delays in the implementation of standard, and perhaps increase the efficiencies in the development of standards.⁶⁹¹

Commentators in the legal and economic literature have expressed divergent opinions on the authorities' approach toward *ex ante* negotiation of licensing terms, particularly in relation to cases of a joint negotiation. Some authors have pointed out that a joint negotiation could give rise to anticompetitive practices. There is the risk, for example, that the negotiation of licensing terms becomes a tool for price fixing, but also for the exercise oligopolistic power on technology providers.⁶⁹² A group of licensees could use the strong bargaining power to reduce the SEP owners' royalties below competitive levels. This can deprive the SEP owner from receiving adequate compensation, and consequently decrease its willingness to participate in future standardization activities.⁶⁹³

Empirical data unveils that the *ex ante* disclosure of licensing terms (both unilateral and collective) had a relatively low success in practice. Although SSOs, such as IEEE and ETSI, implemented policies that allowed participants to disclose their most restrictive licensing terms, SSOs' members have shown a general resistance to make such disclosure.⁶⁹⁴ Participants have often emphasized that it is difficult for companies to make an *ex ante* determination of a licensing fee. The licensing conditions are contingent on several variables, such as the patent portfolio of the licensee, the patent portfolio of the SEP owner, the business structure of both the

690 VITA Business Review Letter.

691 D. Platt Majoras, Recognizing The Procompetitive Potential of Royalty Discussions In Standard Setting, speech prepared for Standardization and the Law Developing the Golden Mean For Global Trade (Sep. 2005), *available* at <http://www.ftc.gov/speeches/majoras/050923stanford.pdf>.

692 *See, e.g.,* R. Gilbert, *Deal or no Deal? Licensing negotiation By Standard Development organizations* (Jun. 2011), *available* at: http://elsa.berkeley.edu/users/gilbert/wp/Gilbert_Deal%20or%20No%20Deal_15%20June%202011.pdf.

693 *See, e.g.,* D. Platt Majoras, Recognizing The Procompetitive Potential of Royalty Discussions In Standard Setting, speech prepared for Standardization and the Law Developing the Golden Mean For Global Trade (Sep. 2005).

694 *See, e.g.,* J. Contreras, An Empirical Study of the Effects of Ex Ante Licensing Disclosure Policies on the Development of Voluntary Technical Standard (National Institute of Standard and Technology, Jun. 2011), *available* at http://gsi.nist.gov/global/docs/pubs/NISTGCR_11_934.pdf.

licensor and licensee, all factored which are often unknown at the time of the discussion of the standard. This renders the *ex ante* declaration of licensing term impractical. Therefore, although competition authorities showed a favorable approach toward the *ex ante* declaration of licensing term, the technique did not have a big success in practice. Most licensing terms are still determined at the bilateral level, typically after the adoption of the standard.⁶⁹⁵

3. JUDICIAL REMEDIES

Competition authorities devoted a considerable attention also to the discussion on the judicial remedies that a SEP owner might be able to obtain against infringers of SEPs. The major concern expressed by the competition authorities is that SEP owners could use judicial remedies, as for example an injunction, to distort the negotiation of the licensing terms and extract exploitative licensing conditions. Competition authorities suggested that a revision of the available remedies could mitigate the risk of the SEP owners' opportunism. Also in this case, however, there are important differences between the approach adopted in the EU and in the United States.

3.1. *Injunctions and exclusion orders*

One of the issues of major concern is the SEP owner's ability to obtain injunctive relief against an infringer of a FRAND-encumbered patent. The DOJ and the FTC recognized that granting injunctive relief in case of patent infringement is in general procompetitive.⁶⁹⁶ They nonetheless added that, in some circumstances, the threat of an injunction can favor holdup, and deprive consumers from the benefits brought by standardization.⁶⁹⁷ They consequently suggested that SEP owners should have only a limited ability to obtain injunctions.

⁶⁹⁵ Such bilateral agreements are normally permitted under antitrust law, given that they represent a regular negotiation between the SEP holder and the licensee.

⁶⁹⁶ *Id.* at 26.

⁶⁹⁷ *Id.* at 5, 26.

Under U.S. law, *eBay* provides the framework for the determination whether the issuance of an injunction is appropriate.⁶⁹⁸ In *eBay*, the Supreme Court emphasized that a patent owner is not automatically entitled to an injunction upon the finding of an infringement, but rather, it must demonstrate that (1) 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.⁶⁹⁹ Only when the listed requirements are met, the patent owner will be able to obtain an injunction.

The DOJ and the FTC suggested that the existence of a FRAND commitment may suggest that “denial of an injunction in favor of ongoing royalties will not irreparably harm the [SEP owner].”⁷⁰⁰ They added that in evaluation the public interest factors, courts may consider

grant[ing] . . . an injunction would deprive consumers of interoperable products; raise costs above the incremental value of the invention compared to alternatives at the time the standard was set; or threaten to undermine the collaborative innovation that can result from the standard setting process.⁷⁰¹

Hence, the two agencies suggested that the remedy available against infringers of FRAND-encumbered patents should be monetary compensation, rather than injunction. They added that monetary damages might be particularly appropriate when the SEP owner is an NPE.⁷⁰²

Further, the DOJ and the FTC addressed also the SEP owner’s ability to obtain an exclusion order from the International Trade Commission (ITC). A patent owner that believes that a specific product imported in the United States infringes its patent

⁶⁹⁸ *Id.* at 28.

⁶⁹⁹ *eBay Inc. v. Mercexchange LL*, 547 US 388, 391 (2006).

⁷⁰⁰ *Id.* at 28.

⁷⁰¹ *Id.*

⁷⁰² *Id.* at 27. (“Conventional wisdom assumes that patentees that do not compete in a product market cannot obtain injunctions because money damages will adequately compensate any harm they may suffer from infringement.”).

may file a complaint with the ITC under Section 337 of the Tariff Act of 1930. If an infringement is found, the ITC will issue an exclusion order against the infringing product, preventing in this way its import in the United States. Unlike cases where the SEP owner request an injunction, the patent owner does not need to meet the *eBay* requirements in order to obtain an exclusion order. The DOJ and the FTC suggested that the ITC should nonetheless take into account the risk of patent holdup when deciding whether to grant an exclusion order against an infringer of a SEP.⁷⁰³ Section 337 of the Tariff Act of 1930 requires the ITC to take into account whether the exclusion order will have an effect on “the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers.”⁷⁰⁴ The FTC and the DOJ suggested that an exclusion order against an infringer of a SEP may be in some circumstances inconsistent with the public interest, given that it may harm competition and consumers “by degrading one of the tools [SSOs] employ to mitigate the threat of SEP owners’ opportunistic actions.”⁷⁰⁵ When this is the case, the two agencies suggested that the ITC should reject to issue an exclusion order against infringers of SEPs.⁷⁰⁶

The suggestions of the two antitrust agencies were partially followed by relevant courts. Some courts have been reluctant issue injunctions against infringers of FRAND encumbered patents.⁷⁰⁷ They reasoned that the SEP owner might not be able to show that the payment of monetary damages is not an adequate remedy for the infringement.⁷⁰⁸

703 US D.O.J. & THE F.T.C., THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION at 30 (2011). (A similar position was expressed also in later documents. *See, e.g.,* U.S. Dept. of Justice & U.S. Patent & Trademark Office, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments* (2013)).

704 19 U.S.C. § 1337(d)(1).

705 The DOJ and the US Patent Office confirmed this position in a later document discussing the remedies available to SEP owners (U.S. Dept. of Justice & U.S. Patent & Trademark Office, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments*, at 6 (2013)).

706 US D.O.J. & THE F.T.C., THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION at 242-243 (2011).

707 *See, e.g.,* Opinion and Order at * 18, *Apple Inc. v. Motorola Inc.*, 1:11-cv-08540, (N.D. Ill. June 22, 2012) (“I don’t see how, given FRAND, I would be justified in enjoining Apple from infringing the ‘898 unless Apple refuses to pay a royalty that meets the FRAND requirement.”).

708 *See, e.g.,* Opinion and Order at * 18 & 19, *Apple Inc. v. Motorola Inc.*, 1:11-cv-08540, (N.D. Ill. June 22, 2012) (“By committing to license its patents on FRAND terms, [the SEP owner] implicitly acknowledged that a royalty is adequate compensation for a license to use that patent.”).

On the contrary, the ITC was less willing to follow the suggestion of the two agencies. In 2013, the ITC for example issued an exclusion order against Apple's products that violated Samsung's SEPs.⁷⁰⁹ However, the exclusion order finally did not take place in practice. The United States Trade Representative (USTR) used an extraordinary measure and issued a notice (veto) to disapprove the exclusion order of the ITC. The USTR maintained that issuing an exclusion order against Apple could result in patent holdup and was thus not appropriate.⁷¹⁰ The veto nonetheless emphasized that the decision was fact specific and did not imply that the SEP owner should be never able to obtain an exclusion order. Rather, the USTR suggested that the ITC should evaluate the specific circumstances of each case, consider the risk of patent holdup and reversed patent holdup, and evaluate whether based on such considerations the issuance of an exclusion order is appropriate.⁷¹¹ The USTR veto indeed strengthens the recommendation of the antitrust agencies, and suggest that it might be more difficult for a SEP owners to obtain an exclusion order against infringer of SEPs.

The situation is different in the European Union. The Commission has not directly discussed the SEP owner's ability to obtain an injunction in front of national courts. As explained earlier, the Commission found that by requesting and enforcing an injunction against Apple Motorola abused its dominant position. However, the Commission did not directly suggest that courts should not issue injunctions to SEP owners. In other spheres, such as private enforcement, the Commission has shown itself ready to issue guidance to national courts, so its silence in this context is surprising.

The analysis of the decisions taken at the national level indicates that the national courts decisions are not completely in line with the position expressed by the European Commission.⁷¹² The standards applied by national courts seem different

709 *See, e.g.*, Notice of Final Determination, Certain Electronic Devices Including Wireless Communication Devices Portable Music and Data Processing Devices, and Tablet Computers, I.T.C. (Jun 2013).

710 USTR's notice to the USITC, Disapproval of the U.S. International Trade Commission's Determination in the Matter of Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers, Investigation No. 337-TA-794, at 3 (August 3, 2013).

711 *Id.* at 3-4.

712 *See* discussion in Chapter VI, [2.2.B. The SEP owner's request for an injunction.](#)

from the standard suggested by the European Commission. In particular, German courts have required a more proactive conduct on the side of the licensee in order to be considered “willing” and thus be able to avoid an injunction. As explained, those divergences have been pointed out by the Düsseldorf court, which referred several questions to the ECJ. As of April 2014, the ECJ did not provide yet an answer. It is nonetheless evident that the European Commission’s suggested approach was not unconditionally accepted by national courts.

In sum, competition authorities of both jurisdictions seem to agree that the use of injunctions for FRAND-encumbered patents (including exclusion orders) should be limited to rare occasions. In addition to their intervention against SEP owners, they used their advocacy role to stimulate both courts and government agencies to limit the availability of such remedies. In none of the systems, however, there is an agreement regarding the exact circumstances in which a SEP owner should be able to obtain an injunction. The US veto towards the ITC’s exclusion order shows that even public institutions disagree on when exactly is the use of such remedy legitimate. Similarly, the approach of the European Commission and national courts did not adopt a coherent approach. It should hence come as no surprise that the solutions suggested by the competition authorities have not been completely implemented by courts and administrative agencies.

3.2. *Definition of FRAND terms*

Finally, competition authorities expressed also the view that a clearer definition of FRAND terms may be desirable to avoid opportunisms in the context of SEPs. Most SSOs require participants to commit to license their technologies on FRAND terms if implemented in the standard. SSOs do not provide however an exact definition of FRAND. It remains consequently unclear what are the exact obligations that such commitment imposes on the SEP owner.

Competition authorities have devoted considerable attention to the definition of FRAND terms, providing, in a way, their own interpretation of a FRAND commitment. In the United States, the DOJ and the FTC addressed the issue in the document *The Evolving IP Marketplace*, where they discussed, *inter alia*, the patent damages that should be awarded to a SEP owner subsequent to an infringement of the

SEP. The DOJ and the FTC suggested that courts should award damages based on a hypothetical *ex ante* negotiation, that is, the licensing term the SEP owner and the licensee would agree before the technology was implemented in the standard. Further, the two agencies suggested that when the SEP faced competition from alternative technologies before the implementation in the standard, the potential licensees would not agree to pay for the SEP more than the incremental value to the next best alternative.⁷¹³ The DOJ and the FTC consequently suggested that “courts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was chosen.”⁷¹⁴ This has been identified in the legal jargon as the “incremental value rule.”

Also in his case, however, economists are no unified regarding the appropriateness of the suggested solution. Some commentators emphasized the necessity to cap the SEP owner’s compensation to the incremental value, and in this way prevent the SEP owner’s ability to hold up manufacturers⁷¹⁵ Other commentators have however criticized such a rule, suggesting that limiting the SEP owner’s compensation would result in undercompensating SEP owners.⁷¹⁶ Sidak for example emphasized that the incremental value rule erroneously assumes that the alternatives to the SEP were available at no cost. He emphasizes that the incremental value rule would result in the determination of suboptimal royalties, which would decrease the SEP owner’s incentive to innovate and continue to contribute its technologies to SSOs.⁷¹⁷

So far, U.S. courts have been asked only in few occasions to determine what constitutes a FRAND royalty, as part of patent infringement and contract law dispute

713 Swanson and Baumol were among the first commentators to propose to extend the theory of incremental value pricing to patent licensing. Their paper focuses on how to best define FRAND licensing in light of the potential that SEP owners could gain market power through the implementation in the standard, which by definition eliminates alternatives. They argue that the SEP owner FRAND licensing terms should be commensurate with the licensing terms the SEP owner could have obtained during the standard setting process, if there had been an auction among competing technologies. (D. G. Swanson and W. J. Baumol, *Reasonable and Non-discriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST LAW JOURNAL 1 (2005)).

714 US D.O.J. & THE F.T.C., *THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION* 23 (2011).

715 *See, e.g.*, M. Lemley & C. Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS LAW REVIEW 1991, 1996 (2007).

716 *See, e.g.*, G. Sidak, *The Meaning of FRAND, Part I: Royalties* (May 2013), 9 JOURNAL OF COMPETITION LAW & ECONOMICS 931 (2013).

717 *Id.* at 43.

between the SEP owner and the licensee. Judge Robart, for example, determined a FRAND royalty in the dispute between Microsoft and Motorola.⁷¹⁸ Judge Holderman determined a FRAND rate in *Innovatio*.⁷¹⁹ The two judgments differ from each other. None of the decisions seems to accept, however, the incremental value rule, at least not in the way suggested by the FTC and the DOJ. Judge Robart explained that the incremental value rule is hard to implement in practice.⁷²⁰ Judge Holderman similarly pointed out the drawbacks on the incremental value rules.⁷²¹ He instead applied what can be defined a “revised incremental value approach”, which did not limit the FRAND compensation to a marginal benefit over the next alternative technology, but took into account also the implementation costs on alternative technologies.⁷²²

Without entering in the merits of the two decisions, it is evident that courts have only partially followed the interpretation of a FRAND commitment suggested by the DOJ and the FTC. Nonetheless, the FTC’s and DOJ’s actions did have an influence on the courts’ decisions, given that in both occasions, the courts emphasized the need to interpret a FRAND royalty in a way to mitigate the risk of patent holdup and royalty stacking.⁷²³

Also the European Commission attempted to provide a clearer definition of a FRAND commitment, though adopting a very different approach from the one suggested by the US antitrust authorities. In the 2011 Guidelines, the Commission suggested that in case of a dispute (perhaps referring to a dispute between the SEP owner and the potential licensee), the determination of whether the licensing conditions are unfair or unreasonable should be based on the determination whether the licensing fee “bears a reasonable relationship to the economic value of the IPR”—implicitly referring to the EU case law on excessive prices.⁷²⁴ Further, the Guidelines suggested a non-exhaustive list of methods that could be used in evaluating whether

718 Findings of Fact and Conclusions of Law, *Microsoft Corp. v. Motorola Mobility, Inc.*, Case No. C10-1823JLR, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013) [hereinafter *Microsoft Motorola decision*].

719 Memorandum Opinion, Findings, Conclusions, and Order, *Innovatio IP Ventures, LLC Patent Litigation*, 1cv-09308 (N.D. Ill. Oct. 3, 2013) [hereinafter *Innovatio decision*].

720 *Microsoft Motorola decision*, *supra* note 718, ¶ 79 (“In practice, approaches linking the value of a patent to its incremental contribution to a standard are hard to implement.”).

721 *Innovatio decision*, *supra* note 719, * 72-73.

722 *Id.* (noting that the court should not ignore the implementation costs of the alternative technologies).

723 *Microsoft Motorola decision*, *supra* note 718, * 14 & 17, *Innovatio decision*, *supra* note 719, * 110.

724 Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements, 2011 O.J. C 11/1, ¶ 289 (2010).

the imposed licensing conditions are FRAND: (1) a comparison between the licensing fee demanded after the implementation in the standard, to the one demanded before the industry has been locked-in the use of standard; (2) a comparison with a licensing fee declared in an ex ante disclosure of licensing terms; (3) the fee charged for licensing the same patents in other comparable standard, (4) independent expert assessment.⁷²⁵

The Commission suggestions are valuable, given that they provide a clearer understanding of the benchmarks that could be used in a potential dispute among the SEP owner and the licensee. The Commission's definition of FRAND terms can be nonetheless criticized on several grounds. To begin with, the definition of FRAND commitment seems misplaced in the 2011 Guidelines, a document addressing the application of Article 101 TFEU to collusive practices. The part of the document addressing the definition of FRAND is clearly directed towards the SEP owners' unilateral conduct (in particular to the unilateral imposition of excessive prices) which should be addressed under Article 102 TFEU, rather than Article 101 TFEU.⁷²⁶ If the Commission wanted to clarify how it intends to address the SEP owners' unilateral conduct, it would be more appropriate to do so in a document addressing the application of Article 102 TFEU. Turning to the substantive merits of the 2010 Guidelines, the Commission's focus on excessive royalties was incomplete. Later cases concerning the SEP owners' conduct have shown that the strategic use of SEPs goes beyond the mere imposition of exploitative licensing fees, and might include licensing strategies that have exclusionary effects, or harm rivals' ability to compete. It seems therefore inappropriate to limit the concept of unfair royalties to excessive licensing fees. It is also interesting to observe that the methodologies suggested in the Guidelines differ from the incremental value rule suggested by the DOJ and the FTC. They are also different from the methodologies Judge Robart and Judge Holderman adopted when determining a FRAND royalties in the context of U.S. FRAND disputes.

In sum, competition authorities of both jurisdictions tried to suggest their own interpretation of the FRAND commitment. None of the suggestions was however able to provide an ultimate answer to what constitutes a FRAND license.

⁷²⁵ *Id.* at. 289-290.

⁷²⁶ *Id.*

4. THE WAY AHEAD

Competition authorities on both sides of the Atlantic have taken active steps in promoting the adoption of mechanisms that could mitigate the risk of opportunism in the context of SEPs. In the European Union, the Commission used its guidelines as a tool to stimulate SSOs to adopt specific procedural requirements that could decrease the risk that participants act deceptively during the standardization process. Further, both in the United States and in the European Union, the competition authorities used their advocacy role to stimulate courts and other institutions to adopt a cautious approach when granting remedies against infringers of SEPs. At the same time, competition authorities provided their own perspective on how courts could interpret FRAND commitments.

The analysis shows that several of the suggested mechanisms have been adopted in practice. SSOs did revise their internal rules, mitigating in this way the risk that participants will act deceptively during the standardization process. One could nonetheless question whether the mechanisms would have been adopted even in the absence of the antitrust intervention. In fact, a revision of SSOs' rule occurred both in the European Union and in the United States, despite the fact that in the United States the competition authorities did not undertake specific actions that would stimulate SSOs to revise their rules. This suggests that market forces may well play a significant role in shaping the SSO s' practices.

The actions undertaken by the competition authorities had some influence on courts' decisions. Particularly in the United States, several courts aligned their position with the one expressed by the FTC and the DOJ. In particular, when ruling on FRAND disputes, they emphasized the need to prevent patent holdup. In the EU Member States, on the contrary, courts were less willing to align their approach with the one expressed by the European Commission. They were for example willing to grant injunctions against infringers of SEPs. The investigations initiated by the Commission did raise, nonetheless, a general awareness about the risk of SEP owner's opportunism, and pointed out the need to harmonies the approach between Member States and the European Commission. It is therefore possible to state that the legal

actions initiated by the competition authorities against SEP owners did have an influence on the courts' ruling, although the solutions suggested by the competition authorities were not always directly implemented.

In suggesting the adoption of further mechanisms, competition authorities should adopt a cautious approach. By stimulating the discussion about SEPs, competition authorities increase the understanding of the problems related to SEPs. Through this, they contribute to the development of mechanisms that are better able to address the problems that arise in the standardization context. They should nevertheless avoid suggesting the adoption of mechanisms that could introduce imbalance in the standardization context. Although it is true that there is a need to prevent opportunism on the side of the SEP owner, it is equally important to avoid opportunistic practices on the side of the licensee.⁷²⁷ The suggestion of an inadequate mechanism might however distort the equilibrium and inject negative consequences in the standardization process.

A good example is provided by the SEP owner's ability to obtain an injunction against an infringer of SEPs. An approach that prevents, or renders very difficult for the SEP owner to obtain an injunction could prevent opportunism on the side of the SEP owner. It could, however, also stimulate opportunism on the side of the licensee. The potential licensee might have little incentive to accept promptly a FRAND licensing offer, if it is already using the SEPs, and the only remedy it is facing is the duty to pay royalties it would have to accept *ex ante*. Introducing a categorical ban on injunction might hence destroy the licensee's incentives to reach a prompt agreement on FRAND licensing terms. Mechanisms that diminish the SEP owner's ability to effectively enforce its SEPs, decrease the SEP's value. As a result, companies might be reluctant to contribute their technologies to SSOs, if they fear that after doing so, they will not be able to effectively enforce their SEPs and obtain a fair compensation for their innovative effort.

Therefore, although the competition authorities' involvement in the SEPs discussion is desirable, there is a need for a balanced approach when suggesting the implementation of further mechanisms. Only a mechanism that avoids opportunisms

⁷²⁷ U.S. DOJ & U.S. Patent & Trademark Office, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments*, at 8 (2013).

both on the SEP owner' and on the licensee' side will, in the long run, preserve the functioning of the standardization process, to the benefit of the consumer.

CONCLUSION

Standards are important engines of our economy. They can have significant procompetitive benefits, particularly in industries with strong network effects. Standards might nevertheless also open the door for practices that can be harmful for consumers. Concerns may arise in relation to standards that rely on technologies unavailable in the public domain, but that are protected by patent rights. Once a patented technology is implemented in the standard, the use of the patent becomes essential for all manufacturers producing standard-compliant goods—a standard-essential patent (SEP).

Two distinctive practices have triggered concerns in the context of SEPs. First, companies might act deceptively during the standardization process, with the aim to favor the implementation of their patented technology in the standard. Such practices can distort competition in the technology market—the market where technologies compete for the implementation in the standard. Second, concerns have arisen with respect to the SEP owner’s opportunistic behavior after its patented technology has been implemented in the standard. The SEP owner can take advantage of the obtained position and impose on the manufacturer licensing terms that the manufacturer would not accept otherwise. Such licensing terms may have exclusionary effects, exploitative effects, or that can harm the manufacturer’s ability to compete with the SEP owner. Both types of opportunism—the deceptive conduct during the standardization process and the imposition of strategic licensing terms—may have also broader negative consequences. They can affect in a negative way the success of the standard and of the standardization process, and thus deprive consumers from the benefits brought by standard-setting activities.

The thesis examined the role competition law plays in addressing the SEP owner’s opportunistic conduct, comparing the approaches adopted in the European Union and the United States. The analysis re-enters within the broader context of the IPR–competition law relationship. There is by now a broad consensus that competition law and IPRs are complementary policies, aiming at the same goals: promote innovation and benefit consumers. There are nonetheless areas where conflicts

between the two bodies of law arise. In such cases, both EU competition law and U.S. antitrust law confirm that a patent owner is in no way immune from the prohibitions of competition law. The exercise of a legitimately obtained patent right can, in specific circumstances, constitute an anticompetitive behavior. A SEP owner's licensing behavior can thus trigger an antitrust liability.

EU competition law and U.S. antitrust law have traditionally adopted different positions when defining the border between patent rights and competition law. The European Commission and the ECJ did generally not hesitate to limit the exercise of patent rights through the competition law provisions. Conversely, U.S. courts have been more cautious in restricting the patent owner's rights through competition law. A patent owner was traditionally much more likely to face an antitrust liability under EU competition law than under US antitrust law. Nonetheless, the analysis showed that this pattern does *not* always hold in the context of SEPs. A practice found anticompetitive under U.S. antitrust law, might trigger no antitrust concerns in the European Union.

EU competition law and U.S. antitrust law adopt a similar approach in evaluating of the SEP owner's market power. As a general principle, both systems recognize that there is no presumption of market power, and that the SEP owner's market power needs to be evaluated on a case by case basis. However, in both jurisdictions, there are cases where courts and competition authorities were willing to conclude that the SEP owner had significant power without providing a thorough evaluation of the direct and indirect evidence of market power. Rather, they defined the relevant market around the individual SEP, which resulted in SEP owner being considered almost *per se* dominant or a monopolist. Such an approach is not in line with economic principles. The analysis has shown that even after the implementation in the standard, the SEP owner might still face competition for alternative standards, or from standard-noncompliant goods. There is hence no reason to assume that the SEP owner holds a dominant position or monopoly power simply because of the ownership of a SEP.

EU competition law and U.S. antitrust law show stronger divergences when scrutinizing the SEP owner's opportunistic conduct. The thesis analyzed separately the antitrust liability for the SEP owner's deceptive practices during the standardization process, and for the SEP owner's strategic licensing practices.

Although the literature rarely discusses the two types of practice separately, the analysis has shown that these practices impose different types of harm and they affect competition in different markets. The SEP owner's deceptive conduct during the standardization process may have *exclusionary* effects in the *technology* market, where technologies compete for the implementation in the standard. On the other hand, the SEP owner's imposition of strategic licensing terms is likely to have *exploitative* (and only rarely exclusionary) effects on the downstream market—that is, the market for standard-compliant goods. Given those differences, it is understandable that competition law has a different role in addressing the two types of conduct.

EU competition law and U.S. antitrust law have different scopes in addressing the SEP owner's *deceptive conduct during the standardization process*. U.S. courts have largely recognized that a deceptive conduct that distorts the standardization process and allows the SEP owner to obtain market power constitutes an act of monopolization in violation of Section 2 of the Sherman Act. To bring a successful Section 2 claim, the plaintiff needs to prove that the technology would not have been implemented in the standard, and no market power would be acquired, but for deception. On the other hand, Article 102 TFEU has a limited applicability in addressing the SEP owner's deceptive practices. The provisions applies only to companies that are dominant at the time of deception. However, the majority of participants of the standardization process are not dominant at the time of deception. Therefore, on difference of Section 2 of the Sherman Act, Article 102 TFEU has a very limited scope in addressing deceptive practices during the standardization process.

This is an interesting result, given that it departs from a general pattern where EU competition law poses stricter constraints than U.S. antitrust law. Cases concerning SEP owner's deceptive practices during the standardization process are one of the rare examples where a company is more likely to face an antitrust liability under U.S. antitrust law than under EU competition law. The reason for the divergent outcomes does not lie in the application of different legal standards, but rather reflects the difference in the text of the two legal statutes. Whereas Section 2 of the Sherman Act addresses the unlawful *acquisition* or maintenance of market power, Article 102 TFEU is not concerned about the way in which companies obtain their dominant position. It only prohibits the abuse of a dominant position, once such position has been obtained. Although this difference did generally not play an important role in

contexts of other antitrust interventions, it becomes particularly relevant when addressing the deceptive behavior during the standardization process. Cases addressing the SEP owner's deceptive behavior during the standardization process thus point out at a fundamental difference between the EU and U.S. antitrust provisions addressing the company's unilateral conduct.

EU competition law and U.S. antitrust law have different scopes also when addressing the second type of opportunism—the SEP owner's *strategic licensing practices*. In this case, however, the results are more predictable. SEP owners are more likely to face an antitrust liability under EU competition law. Article 102 TFEU has a wider scope, given that it enables the competition authority to address a large spectrum of licensing practices, including those that result in a mere exploitation. To the contrary, the imposition of exploitative licensing conditions does not constitute an anticompetitive behavior actionable under Section 2 of the Sherman Act. Therefore, a SEP owner is unlikely to face an antitrust liability for imposing exploitative licensing conditions on manufacturers. The narrower scope of the Sherman Act has led the FTC to consider if a different outcome is possible under Section 5 of the FTCA. The FTC has challenged the SEP owner's exploitative licensing practices as a Section 5 standalone offence. Nonetheless, the cases addressed so far have been concluded with consent decrees, without thus determining whether, and under which conditions, the SEP owner's conduct constitutes a Section 5 standalone offence. For now, it seems therefore that both Section 2 of the Sherman Act and Section 5 of the FTCA have a limited ability to address SEP owner's exploitative licensing practices.

EU competition law and U.S. antitrust law thus lead to different results also when addressing the SEP owner's imposition of strategic licensing terms. Again, the different results are not attributable to the application of different legal standards, but rather reflect the differences in the legal provisions. Whereas Article 102 TFEU prohibits the *abuse* of a dominant position, Section 2 of the Sherman Act is not concerned about the way in which a company uses a legitimately obtained market power. It does consequently not capture practices that have merely exploitative effects. Therefore, even though EU and U.S. competition authorities have expressed similar concerns with the SEP owners' exploitative licensing practices, they are unable to address those practices in a similar way, because of the difference in the text of the antitrust statutes.

This result is indeed less surprising. Also outside the SEPs' context, EU competition authorities have condemned exploitative conducts of dominant undertakings (although such actions were relatively rare), whereas those conducts were not condemned under U.S. antitrust law. What is perhaps more surprising is that both in the European Union and in the United States there has been an increasing interest in addressing exploitative practices. In the past, the European Commission's enforcement practice has focused on exclusionary conducts, and they were only few cases where the Commission challenged dominant undertakings' exploitative practices. The situation is however different in the context of SEPs, where the European Commission initiated several investigations challenging SEP owner's licensing practices that allegedly had exploitative effects. A similar trend is present also in the United States, where academics have increasingly called for a more interventionist approach towards SEP owner's practices that result in an exploitation. The FTC has showed the intention to prosecute some of these cases through Section 5 of the FTCA. The approach competition authorities adopted in the context of SEPs thus departs from what we observe in other areas, where exploitative conducts do not represent a major antitrust concern.

The analysis has also shown that, regardless of the legal ability to intervene, the antitrust intervention towards SEP owner exploitative licensing practices remains controversial. There are several reasons for it. First, the absence of a clear test renders the distinction between an exploitative and a legitimate licensing practice difficult. The absence of a legal test leaves a substantial level of legal uncertainty both for the SEP owner—who does not know whether the licensing terms it suggests are within the borders of legality—and for the competition authority—which does not have clear guidelines in determining whether the challenged practices is anticompetitive. This factor is further complicated by the absence of an agreement in the economic literature on what constitutes a patent holdup and what effects it imposes on consumers. Second, the antitrust intervention towards exploitative practices is controversial because of the difficulty in designing the adequate antitrust remedy. Third, the necessity for an intervention is diminished by the fact that the legal system provides alternative mechanisms to address the SEP owner's imposition of exploitative licensing terms. A manufacturer that believes that the licensing conditions demanded by the SEP owners are exploitative can bring a legal action and demand the court or

an arbitration body to solve the dispute over the licensing terms. The legal basis for such actions is not antitrust law, but rather contract law. Hence, even under EU competition law—where Article 102 TFEU provide a legal basis for an antitrust intervention—it remains questionable whether addressing the SEP owner's exploitative practices through competition law is a wise decision as a matter of public policy.

A comparative analysis of the two systems also showed that neither EU competition law nor U.S. antitrust law provides a complete solution to the concerns related to SEPs. Both systems have gaps, in the sense that competition law provisions are not able to address all types of opportunism that may arise in the SEPs context. This has stimulated the competition authorities of both jurisdictions to use advocacy to encourage the adoption of mechanisms that could mitigate the risk of SEP owner's opportunism. In particular, they aimed at strengthening the SSOs' internal rules and revise the patent remedies available to SEP owners against infringer. The analysis showed that SSOs did revise their internal procedures, adopting mechanisms that make the participants' deceptive behavior less likely. It is however questionable to what extent these changes were the result of the antitrust intervention. Similarly, also courts and other enforcements agencies have adopted a cautious approach when granting patent remedies to SEP owners. They nonetheless refused to apply directly the solutions suggested by the competition authorities. Therefore, the informal antitrust enforcement in the SEPs context was only partially successful.

In conclusion, it is possible to state that competition law plays an important role in the context of SEPs, given that it is one of the essential mechanisms to assure the well-functioning of the standardization process. Besides ensuring that standardization activities are not used as a tool for collusion or foreclosure, competition law should also address certain unilateral practices that arise in the context of SEPs. First, U.S. antitrust provisions play an important role in preventing the SEP owner's deception that subverts the competition in the technology market. Next, EU competition law can play a relevant role in addressing cases where the SEP owner imposes licensing practices that harm rivals' ability to compete. Nonetheless, there will be cases where the SEP owner's conduct, although opportunistic, will fall outside of the competition law domain. This does not necessarily indicate that competition law has gaps that need to be filled. Perhaps, some conducts simply do not impose the type of harm

competition law aims to prevent. In those circumstances, competition law should not aim to stretch its doctrines in the way to cover the existing gaps, but it should rather leave these conducts to be addressed by other areas of law. Stretching the reach of competition law, risks causing more harm than leaving the SEP owner's conduct unaddressed by competition law.

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