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The obscurity with standard settings

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Summary

This thesis takes its inspiration from two statements of objections given by the Commission of the European Union and compares it with the equivalent legal development in the US. The objections hint to the EU judiciary's stance towards standard setting organizations and conduct exclusive to standard setting processes. Focus will be given to the development on EU competition law under article 102 TFEU and similarities and differences to Section 2 of the Sherman act will be discussed. The thesis' aim is to highlight three specific behaviors that have both been acquitted and convicted by the US courts and then deduce potential outcomes under EU law. The paper analyzes potential outcomes from a legal point of view and will also take into consideration relevant economic aspects and theories.

The thesis depicts the differences between the two legislations and concludes that the EU approach both could mirror the US approach and be of opposite conclusion. It is also concluded how the specific conduct relates to established legal rules in the EU and potential possibilities to apply them. This is pitted against the possibilities for the specific conduct to avoid scrutiny under article 102 TFEU and brings to light consequences of such an approach.

Finally the thesis ends with a discussion on how strong protection EU competition law provides compared to US antitrust law and presents an explanation to why EU law is more suited to address behavior inherent in standard setting organizations.

Preface

When I was going to select a thesis topic my immediate aspiration was to examine the interaction between competition law and intellectual property. During the course of my master's program I had already come in contact with the subject through the *AstraZeneca* judgment, delivered by the General Court in 2010. For me it was very interesting to study the EU competition law in a field yet untried by the EU judiciary. Thus the choice fell naturally to examine abusive actions inherent in standard setting organizations. The possibility to make a comparison to the US antitrust laws further spurred my interest.

This thesis marks the end of my five year study at the faculty of law in Lund. It has been a thrilling journey, and I would like to thank all the students and teachers that made it memorable. I would also like to thank my parents and family for their unending support in all my academic endeavors.

Finally, I would like to thank my supervisor universitetsadjunkt Henrik Norinder for his support through this long process. His good advice and guidance has helped me formulate and structure my problem and thesis in an enjoyable manner.

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Adrian Bergkvist

Abbreviations

CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CJEU	Court of Justice of the European Union
(D)RAM	(Dynamic) Random-Access Memory
EPC	European Patent Convention
EPO	European Patent Office
ESO	European Standard Organization
ESS	European Standardization System
ETSI	European Telecommunications Standards Institute
(F)RAND	(Fair) Reasonable and Non-discriminatory
FTC(A)	Federal Trade Commission (Act)
GC	General Court
ICT	Information and Communications Technology
IP(R)	Intellectual Property (Right)
JEDEC	Joint Electron Devices Engineering Council
OECD	Organisation for Economic Co-operation and Development
MS	Member State
TFEU	Treaty on the Function of the European Union
SSO	Standard Setting Organization
WTO	World Trade Organization
SSNIP	Small but Significant and Non-transitory
increase	In Price
(W)CDMA	(Wideband) Code Division Multiple Access

1 Introduction

Competition law is a constant evolving area and is perhaps one of the most developed principles of the Internal market and its protection. Since its introduction article 81 and 82 EC, and later article 101 and 102 TFEU, have evolved to incorporate a more economic approach adopting efficiency defenses and objective justifications. The primary aim of developing the EU competition law has been to unify the European market. To accomplish this, the Commission of the European Union has constantly tried to find new abuses under the rules and applied new assessments to create a fair and competitive market. Perhaps one of the most developed and debated elements is the assessment of abuse and how it incorporates economic methods and its importance to markets with a high degree of innovation, such as markets relying on standard setting organizations.

The Commission's decisions and statements and later the cases of the EU judiciary often leave big wakes in their conclusions, while searching for new abuses. The wording of article 102 TFEU is non-exhaustive and places no real limit to the ability to be applied to numerous scenarios. Indeed when applied to undertakings that use IPR to strengthen their position or gain leverage over competition these companies might find themselves in a situation where the Commission considers them dominant and the use of such lawfully gained rights are excluding competitors or damaging the competitive climate.

Competition law applied to the behavior of undertakings in standard setting organizations has seen very little development. To date there has been no explicit case dealing with conduct in a SSO environment. The Commission has issued statements of objections, which in turn never developed to a decision or case. Cases concerning the use of IPR and competition law have been dealt with outside SSO environment and has sometimes allowed for certain restrictions in relation to article 102 TFEU. Across the Atlantic the US development has been different. There the US courts have applied their

antitrust legislation to exclusively conduct unique to SSOs with both success and adversity.

1.1 Purpose

The purpose of this thesis is to analyze the application and the possibilities of application of the theory of abuse of dominant position present in EU competition law to specific conduct inherent in standard setting organizations. The thesis aims to evaluate the result of applying article 102 TFEU to such behavior. Parallel to this an examination and analyzes of the same actions will be done under the more developed US antitrust law.

1.2 Method

In order to explain the specific subject matter the economics and logics behind standard setting organizations will be detailed. It will analyze the inherent dangers against competition and will focus both on legal and economic theories.

In order to establish the current state of law in both the EU and US a traditional legal method will be used. To achieve the objective of the thesis an analogical application of current relevant case law and legislation from the EU on the specific subject matter will be the done. This is done in order to understand how the EU judiciaries conceptualize legal problems and solve issues with regard to competition law and the perseverance of the internal market. Accordingly the primary source will be jurisprudence from the EU courts and legislation from the EU. Because of the lack of case law related to the specific subject matter doctrine will be relied on to compensate for this. The US analysis will focus more on jurisprudence, being of common law tradition and having a much more developed range of case law related to the specific subject matter.

A comparative analysis between the EU and US legal systems will be done to draw attention to potential similarities or differences. A more in dept discussion of how the EU legal system should or might evolve concerning

the specific subject matter will follow using primary legal theories but will also incorporate economic methods and arguments.

The materials used will contribute to give a connection between the different focus points of the thesis and help explain scenarios and problems not yet addressed by the EU judiciary.

1.3 Delimitation

Conduct within the context of an SSO raises a myriad of legal problems and for a full assessment it would be necessary to detail every aspect of both patent law, on national and EU level, and EU competition law. However such an extensive review is not necessary for the purpose of this thesis. The issue is to discuss the concept of specific abuses applied to conduct in a standard setting environment, together with the development in the US. The US antitrust legislation is much more developed and will be narrowed down to an explanation of relevant situations that have appeared in both legal systems. The choice of standardized industry is based on the importance of standardization to that industry and its appearance in both legal systems. Although an economic consideration is given in the thesis it will be limited, this being a paper in law and the issue of standard setting economics is far too vast to be covered here. The issue will be highlighted through article 102 TFEU and the concept of abuse of dominant position and interact with patent law to the extent it affects the undertakings conduct. No in depth explanation will be given to the patent regulations present in the EU, and the general effort will be aimed to describe the fundamentals. This thesis ultimately is limited to the use of patents in a standard setting environment and how such a conduct may be affected by the concept of abuse of a dominant position. In order to discuss this concept it is appropriate to pay attention to the most developed legal area, which is the US courts' progress. The limitations chosen are logical, a wider scope would demand a more complex analysis of both legal and economical aspects and would limit the attention given to respective focus points.

1.4 Disposition

The thesis will start with an explanation of the economics and characteristics of standard setting organizations. It will provide a brief understanding of what standard setting organizations try to accomplish. Following, the present state of law in EU patent and competition law will follow. This will be a general overview of the most basic and fundamental aspects of the respective field of law. The descriptive part of the thesis ends with a review of how the EU courts have applied competition provisions to the use of IPR. The thesis focuses on the use of patents, which amount to abuse of dominant position, in a standard setting environment. A walkthrough with previous jurisprudence connecting the two areas of law will serve to give the reader an understanding of the EU judiciary's viewpoint on the matter.

Following chapter will detail the specific conduct examined in the thesis. It will outline the Commission's statement of objection and will also discuss the inherent dangers against competition found in SSOs. This will be followed by a chapter detailing both the US antitrust law and the US court's approach to the subject matter. Concluding the thesis will be a conclusion divided in two parts. The first part will address differences and similarities between the US and EU legal systems. This comparative analysis will cover differences both present in the legislations discussed and its application to the specific conduct. This will be followed by a discussion concerning only the future application of 102 TFEU by the EU judiciary to the specific conduct. This part will incorporate both a legal and economical analysis, focusing on the consequences of potential rulings. The order chosen serves to introduce the reader to the necessary elements present in a standard setting environment and later introduce the specific conduct and the US approach.

2 Standard Setting Organizations analyzed

2.1 The Economics and Characteristics

Developing and providing a common design for a specific product or process is the purpose of a standard.¹ Standards are common in markets where compatibility and interoperability are essential; the standards agreed upon cover various issues, ranging from product size to technical specifications.² If standard agreements are accurately implemented they benefit both companies and consumers by economic efficiencies. The compatibility and interoperability created is essential for many industries, this can be seen especially in the IT, telecom and the general network industry. OECD has defined these types of industries as a combination of manufacturing and service industries.³ In order for the industry to operate successfully there is a need for customers and consumers around the world to connect, interact and enjoy the benefits from such technologies without having to switch between products and brands. To this end it is therefore especially important for these types of industries to develop products that interoperate with each other through technical standards.

The benefits are not only limited to customer and consumer advantage. Standard agreements on technologies also create means for companies to advance technologies with reduced risks and to market them faster. Without standards a risk arises for companies were they'd have to choose one of several available technologies without any insurance that the selected technology would not become redundant. Customers and consumers could hesitate to buy a product until a *de facto* standard emerges which would put other potential technologies at a disadvantage and render them obsolete.

¹ H Hovenkamp, *Standards Ownership and Competition Policy* (2007) 48 Boston College Law Review 87.

² Guidelines on the applicability of Article 81 of the EC Treaty to horizontal cooperation agreements, OJ [2001] C-3/2, para 159.

³ OECD, *Measuring the Information Economy Available* (2002), p. 19.

Consequently the economic benefits for undertakings of standardization are to develop platforms that unite companies through standard technologies, diminishing the risk of losing out to a *de facto* standard. This effect is transferred to the competitive climate and may stimulate the price setting. Narrowing down a technology to one standard increases the substitutability between the products that the undertakings produce and thus a lower price will be set by companies.

Initially the standard will not reap these benefits; it must be widely employed before it pays off. However, the selection of a technology for a standard diminishes the number and variations at the standardized level. Accordingly non-complying technologies or products will find it hard to stay on a market that is subject to standardization with sufficient sales or even compete with the standardization because of inferior technology. Consequently undertakings that possess IPRs that are essential to the standard could find themselves in very strong positions and enhanced market power. Such a position could, unless restricted, be easily abused in their newly gained licensing power. Thus while standard might benefit competition it also has the potential to restrict it through the reduction of inter-technology competition. Consequently the standardization process on a market must be kept at an appropriate level in order to avoid “over-standardization” which would lessen competition. Consumers have different preferences and therefore product differentiation is still important.⁴In its guidelines the Commission stated, “Agreement on standards should cover no more than what is necessary to ensure their aims, whether this is technical compatibility or a certain level of quality”.⁵A balance must be attained, however this has proven difficult. The competition authorities would have to determine the scope of the standard, which would force them to rule on the technical subject matter. Therefore such decisions

⁴ H Hovenkamp, *Standards Ownership and Competition Policy* (2007) 48 Boston College Law Review 87

⁵ 2001 Horizontal Cooperation Guidelines, para 173. See also Communication from the Commission. Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements. OJ (2011) C-1/14. Para. 308.

have been limited in their appearances since they extend beyond the competence of the authorities.⁶

2.2 Open Standards

Open standards is the most commonly used concept of standardization, however no fixed definition has emerged, i.e. its meaning is not unanimously shared. Doctrine have defined open standards as “a public available technical specification that is developed or approved/ratified and maintained by a consensus-based process in a voluntary, market-driven standards setting organization that is open to all interested and qualified participants, and for which any patent rights necessary to implement the specification are made available by those developing the specification to all implementers on reasonable and non discriminatory terms (with or without a royalty or fee)”.⁷ The WTO has established a similar meaning to the definition. In The Agreement on Technical Barrier to Trade the WTO committee establishes guidelines for both governmental and non-governmental industrial undertakings that govern good practice. This practice entails the bodies to make use of voluntary standards.⁸ Indeed there seems to be an increasingly general understanding of the definition of open standards, and currently over 100 countries have adopted the WTO definition and it is used by more than 200 standard setting organizations.

In the context of EU there exist three formal acknowledged SSOs, known and referred to as ESOs. These are the CEN, CENELEC and ETSI.⁹ These are complemented by national standards, which are each recognized in their respective MS. Together they are governed by the European

⁶ H Hovenkamp, *Standards Ownership and Competition Policy*, (2007) 48 Boston College Law Review, p. 108-110.

⁷ J Markwith, *Key Intellectual Property Issues in Acquisitions Involving Open Source Software*, (2008) 14(2) Computer and Telecommunications Law Review, p. 45- 47

⁸ The Decision of the Committee on principles for the development of international standards, guides and recommendations with relation to article 2, 5 and annex 3 of the WTO/TBT Agreement.

⁹ European Committee for Standardization; Comité Européen de Normalisation Électrotechnique; The European Telecommunications Standards Institute

Standardization System (ESS) enshrined in Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998. The directive enables cooperation and transparency between the SSOs and the Commission. Of note is that the ESOs are regarded as bodies of the Union and considered to pursue an objective of general interest to the EU. However, these organizations and the corresponding legislation have faced the problem of outdated, this is particularly the case in the IT sector where the technology is developed at a much faster pace than the legislation can develop. A large part of established standards, such as HTTP, HTML and Wi-Fi have been developed by non-formal SSOs. Thus the Commission presented a White Paper, detailing suggestions on how to modernize the regulation governing standardization policies.¹⁰ In order to establish a set of principles to guide SSOs and their conduct the Commission developed a list of attributes they should work towards. This list addresses the issues the old regulation failed to cover. It enables non-formal SSOs and their resulting standard to be covered by the same rules and ensures that the necessary procedures are applied to them as well as to formal SSOs. The list favors an openness of the standardization process and its resulting standard. Accordingly an SSO process occurs within a non-profit-making environment with open decision-making. The process shall also be accessible at any stage of development to relevant stakeholders. It shall also be accessible to all parties that might be interested in full transparency regarding information and activities. A resulting standard should be made available for public implementation and use at reasonable terms for a reasonable fee or free. Essential IP to the implementation is licensed on FRAND terms, such terms include free licensing if the IPR holder wishes it. The resulting standard should also, if possible, be performance oriented instead of design or descriptive. Standards should not distort the global market and should maintain the capacity for implementers to develop competition and innovation based upon the resulted standard, thus guarding

¹⁰ Commission White Paper, “Modernizing ICT Standardisation in the EU—The Way Forward”, COM(2009) 324 final.

the competitive climate.¹¹The list has naturally drawn much attention from affected industries. It is far reaching in its attempts to open up standards and might even be regarded as controversial in its attempts to direct the organization and structure of SSOs and their use of IPRs. Though not a legislative act, the Commission is at work with developing a legislation that will have elements of the White Paper as its foundation.

2.3 Defining FRAND

It will be recalled that the success of a standard is dependent on it being widely implemented, i.e. it must be easily accessible for parties that might draw use of the standard. Since IPRs are essential to standards its holders' intentions to make them available to implementers often determine the availability and thus success of the standard. The Commission has published a report that urge SSOs to warrant policies that are advantageous to innovation and use of their IPR. The Commission stresses the importance of finding the right balance between the rights of IPR owners and the interests of the users of standards.¹²The EU has a strong policy regarding the availability of IPR. Through the well developed case law and expansion of the Competition provisions in the treaty the EU judiciary have often opted to require essential IPR be made available so that affected parties can use them. Accordingly, interested parties can use this to implement standards and get access to protected technology. This has in turn created FRAND licensing, i.e. IPRs become available on fair, reasonable and non-discriminatory terms. This is the most commonly used licensing method when the SSOs don't use royalty-free licensing, which is predominant in the IT and software industry.¹³

¹¹ Ibid at p. 4–6.

¹² Report of the Expert Panel for the Review of the European Standardization System (EXPRESS), *Standardization for a competitive and innovative Europe: a vision for 2020*, EXP 384 final (2010), p. 16–17.

¹³ Ibid. p. 18.

Formal SSOs often require members of the standardization process to disclose any patents in their possession that might be essential to the standard. This is combined with a binding commitment to license said IPR on FRAND terms. This is done in order to avoid so called patent ambushes, where an undertaking conceals an essential IPR in order to demand high licensing prices when the standard is set and the organization has locked in on a certain technology. The FRAND method has been appreciated where SSOs benefit from the inclusion of certain IPR or certain undertakings in its organization and there otherwise would be a risk that such actors would not join if the licensing were to be royalty-free. There exists however no definition of what FRAND licensing should be, on what terms and how high an undertaking can set the fee. What is clear is that an undertaking with essential IPR ends up in a very strong position. Depending on their previous market position they might become either dominant or super-dominant.

3 EU Patent Law

3.1 Economics behind patents

Standard settings can occur in all types of industries but it will be recalled that it is particularly common in IT, telecom, and network sectors. Not depending on the type of industry, SSOs relies heavily on technology advancement and the companies involved depend in turn on patent protection for their innovations and products. This is more so in industry sectors that have high product costs, measured in both time and capital, to establish the product on the market. Thus many companies that might utilize and be members of SSOs are dependent on the core functions of patent protection. Benefits of patent protection is not limited to undertakings and the incentive to innovate, it entails a requirement on the patentee to make all necessary information regarding their innovation available. Thus it entails an advantage for society; the knowledge becomes available as a whole.

Accordingly, protecting an undertaking's technology or product is a way for governments to encourage companies to develop new and better products for society, while guaranteeing a protection for the time involved in developing it. How far such a protection should extend has proven difficult to determine. There is no general theory on the scope of protection; doctrine argues that the underlying problems of different subject matters and industries make it excessively difficult to narrow it down.¹⁴ Another dilemma is that patent protection is subject to national law i.e. it falls outside the scope of harmonization. Accordingly this could lead to different interpretation by different jurisdictions.

3.2 Patents in the EU

Today one cannot obtain one patent that would be valid in the entire union. Undertakings have instead three options when applying for a patent.

¹⁴See generally, L. Bently and B.Sherman, *Intellectual Property Law*, (3d edition) 2009, Oxford University Press.

- i) Applying at the patent offices in all member states.
- ii) Apply at the European Patent Office (EPO). Would such a patent be granted they are called European Patent.
- iii) Applying the Patent Cooperation Treaty. The undertaking chooses a patent authority from one member state and applies for patent there. This office is called receiving office and they in turn transmit the application to other member states designated by the undertaking.

Although the latter two alternatives are designed to make the process easier for undertakings the patent still has to be validated by all patent authorities in the member states they wish to be granted protection for. The lack of harmonization of a single EU patent creates difficulties in patent litigation. Since the patents are granted on a national level they must be enforced by proceedings in national courts, creating unnecessary costs for the undertakings.

The European Patent is governed by the European Patent Convention (EPC). This convention is regarded as an intergovernmental treaty and not part of the European Union.¹⁵ It entails provisions detailing when a patent will be granted in the EU. Article 52 outlines the conditions an innovation has to fulfill in order for it to be patentable. According to 52(1) a patent will be granted, “for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.”¹⁶ Further, the invention need to fulfill three requirements for the patent to be granted. The first step is entailed in article 54; accordingly an innovation has to fulfill a novelty requirement. Thus an invention must be regarded as state of the art.¹⁷ If the invention can be regarded as *prior art* the patent will be granted, i.e. if the invention has become available to the public prior to the patent application it is not regarded as state of the art and thus not patentable.¹⁸ The concept of *prior art* is designed to be

¹⁵ L. Bently and B.Sherman, *Intellectual Property Law*, (3d edition) 2009, Oxford University Press, p. 341.

¹⁶ EPC Article 52 para. 1.

¹⁷ EPC Article 54.

¹⁸ L. Bently and B.Sherman, *Intellectual Property Law*, (3d edition) 2009, Oxford University Press, p. 371.

exceptionally broad to cover all matter, which are patentable. This requirement entails a risk for the undertaking. A patent could be granted but later be withdrawn or deemed unenforceable because *prior art* was discovered after the patent was granted. Secondly the product or technology must contain an inventive step.¹⁹ According to the EPO an analysis of whether an innovation contains an inventive step should be based on objective, economical and transparent processes, resulting in the “problem-and-solution approach.”²⁰ According to this method a patent is a solution to a problem and the test that is applied by the EPO is determining if the invention solving the problem is obvious to the person skilled in the art.²¹ Before granting a patent one must determine the technical field the innovation belongs to. After this is done the examiner assesses whether there is an inventive step by deciding what the closest art is. This is done in order to compare the solution given to address a problem and compares it with the closest prior art. Lastly the innovation must be susceptible for industrial application.²² Accordingly the innovation must be able to be used or made in any kind of industry. The concept of industry has been constructed to be broad and is not dependent on profit.²³ It will be recalled that there is no complete harmonization in patent law that can be enforced by the EU judiciary. The Brussels I Regulation makes up the current available framework²⁴ together with the IP Enforcement directive²⁵. The statutory frameworks is not equipped to address cross-border injunctions and are prone to delay proceedings for undertakings, or used as strategies to intentionally delay proceedings. The lack of

¹⁹ EPC Article 56.

²⁰ L. Bently and B.Sherman, *Intellectual Property Law*, (3d edition) 2009, Oxford University Press, p. 371.

²¹ *Ibid.*

²² EPC Article 57.

²³ L. Bently and B.Sherman, *Intellectual Property Law*, (3d edition) 2009, Oxford University Press, p. 371.

²⁴ Council Regulation (EC) No. 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Brussels I Regulation), OJ L [2001] C-12/1.

²⁵ Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights (Enforcement Directive), OJ L [2004] C-157/16.

harmonization inevitably creates additional problems, such as a multitude of litigations for one innovation. These problems are both unnecessary and costly for the undertakings and national judiciary, creating different outcomes addressing the same innovation with no possibility for consolidation of the judgments. Article 22(4) of the Brussels I Regulation empowers the national courts of the member states with exclusive jurisdiction if a patent is registered within their jurisdiction. Accordingly this might lead to a wide variety of results by different national courts; some might be in favour of an infringement while some might not find one. However, both the Commission and the Council promotes the idea and concept of a common European patent system with conjoint enforceable patent rights and an EU patent court. To this end they have published a suggestion establishing a Union patent system.²⁶

²⁶ Proposal for a Council Regulation on the Community Patent (Working document of 30 October 2009 (15149/09) of the Council of the European Union) with references; Draft Agreement on the European and Community (EU) Patents Court and Draft Statute, Working Document (7928/09) of 23 March 2009 from the Council of the European Union.

4 EU Competition Law

This chapter will be dedicated to give a general overview and explanation to the EU competition law system. It will be devoted to provide the law as interpreted by the EU judiciary and will be complemented by established doctrine.

4.1 Article 102 TFEU

“Enterprises holding a significant market power should receive considerable scrutiny by competition authorities. From an economic perspective, firms that dominate a market have the kind of economic power that normally reduces efficiency because there are no competitive pressures to prevent the dominant firms from raising prices and reducing output”.²⁷

Article 102 TFEU safeguards the internal market by prohibiting companies from conducting unilateral abusive behavior. For an abuse of a dominant position to be established the following requirements must be shown; that the undertaking is dominant in a given market; that the scrutinized company abused its position; the abuse had an effect on trade between Member States; and that no objective justification for the abuse is applicable.²⁸

The provision further provides a list of four types of conducts that infringe the competition rules.²⁹ This list is however not to be regarded as an extensive catalogue of abuses according to settled case law.³⁰

4.1.1 Liability under article 102 TFEU

A company needs to be in a dominant position in order to incur liability under article 102 TFEU. According to the CJEU in the landmark case

²⁷ Chalmers, D; Davies, G; Monti, G; *European Union Law*, (2nd edition) 2010, Cambridge University Press, p. 997.

²⁸ Ibid.

²⁹ TFEU article 102.

³⁰ CJEU, Joined Cases C-395/96 P and C-396/96 P, *Compagnie Maritime Belge Transport v Commission* [2000] ECR I-1365, para. 112, *See also*, J. Goyder and A. Albers-Llorens, *Competition Law*, (5th edition), Oxford University Press 2009, p. 297.

United Brands this has been defined as occupying a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained in the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.³¹ The CJEU has further stated that two or more undertakings have a jointly dominant position if they are able to adopt a common policy on the market and to act to a considerable extent independently of competitors, customers and consumers, and significantly impede effective competition in a relevant market within the EU. Accordingly the concept is made dependent on the products or services in relation to other substitutable products or services on the relevant market and the position of the company and its competitors on the market.³² Thus the first important inquiry is to establish the relevant market, by examining the geographical market together with the product market. This is combined with the particular features of the market structure as such, i.e. the concerns about the competitive climate in the market.

The product market is distinguished by defining the interchangeability or substitutability of products or services from the consumers' or buyers' point of view. This analysis consists of examining the characteristics, prices and intended use of the products in question.³³ The scrutiny enables one to conclude whether the product or service is sufficiently distinguished from neighboring markets. The methods devised to determine the product market are becoming more influenced by economic theories. This can be seen in the "SSNIP-test"³⁴ which seeks to identify the smallest relevant market within which a hypothetical monopolist or cartel could impose a profitable significant increase in price.

The geographical market is best described as an area in which the conditions of competition applying to a specific product or service are equal for all

³¹ CJEU, Case C-27/76 *United Brands v Commission* [1978] ECR 207, para. 65.

³² H.H Lidgard, C. Wetter, R. Moldén and M. Glader, *Competition Classics*, 2011, Faculty of Law Lund University, p. 321.

³³ CJEU, Case C-27/76 *United Brands v Commission* [1978] ECR 207, para. 22,23,28,29,35.

³⁴ Small but Significant and Non-transitory Increase in Price-test.

actors. Article 102 TFEU defines the geographical market as “the internal market or in a substantial part of it”. Accordingly, a dominant position can be held within the entire internal market of the EU or a specific part of it. Clarification can be sought in the jurisprudence of the Court. According to the CJEU in *United Brands* five member states were held to constitute a substantial part of the internal market.³⁵ The Court concluded that the geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogenous and which can be distinguished from neighboring areas because the conditions of competition are appreciably different in those areas.³⁶ The rulings of the Court are vague at best and do not provide any concrete guidance as to what size constitutes a substantial part of the internal market. This can be seen in case law where the EU authorities held that a major port coupled with a route and a major airport can constitute a substantial part of the internal market.³⁷

4.2 The Concept of abusive conduct

According to article 102 TFEU establishing dominance on the relevant market is not in itself enough to find an infringement. Instead the focus of the analysis shifts to examine whether there is any abusive behavior of the undertaking. Abusive conduct according to article 102 TFEU has been held by the CJEU as an objective concept. It is a specific behavior of an undertaking in a dominant position that affects the structural integrity of a market. As a result of said action and the presence of the dominant undertaking, the degree of competition is weakened and by other methods different from those conditioning normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the market or the growth of that competition.³⁸

³⁵ CJEU, Case C-27/76 *United Brands v Commission* [1978] ECR 207, para. 36

³⁶ CJEU, Case C-27/76 *United Brands v Commission* [1978] ECR 207, para. 44-53

³⁷ 92/213/EEC, *British Midland v Aer Lingus* [1987] CMLR 465, *See also*, GC, Case T-128/98 *Aéroports de Paris v Commission* [2000] ECR 3929

³⁸ CJEU, Case 85/76. *Hoffmann-La Roche & Co. AG v Commission*. para. 91.

The theory of abuse has been extended by the CJEU in its case law; in *Michelin v. Commission* the Court stated that the concept could actually limit the exercise of competitive strategies for dominant firms. According to the Court the obligations imposed by article 102 TFEU held that in specific circumstances, undertakings in a dominant position may be deprived of the right to adopt a course of conduct or take measures which are not in themselves abuses and which would be legal if conducted by an undertaking in a non-dominant position. In the same case the CJEU expanded the concept of affecting trade between Member States. Accordingly if a dominant company obstructs access of new competition on the relevant market, it does not make a difference if the conduct is confined to a single Member State as long as the conduct taken could be capable of affecting trade and competition within the internal market. The criterion of affecting trade between Member States is satisfied once the abusive conduct of a dominant company could be capable of affecting trade between Member States.³⁹ Consequently, there is no requirement that the abusive behaviour is in fact noticeably affecting trade.⁴⁰ An abuse directed to third countries could be still be caught by Article 102 if it has an effect on the structure of competition between Member States.

The vague definition of abuse provides no precise point of reference or method for identifying the limits of article 102 TFEU. The CJEU has held that a combination of the acquisition of IPR and excessive pricing could amount to an abusive behaviour if the IPR is used to try to eliminate competition.⁴¹ Another abusive conduct is margin squeeze, which could have an exclusionary effect on competition.⁴²

³⁹ CJEU, Case C-322/81 *Michelin v Commission* [1983] ECR 2015, para. 57, fn. 2.

⁴⁰ CJEU, Case C-41/90 *Höfner and Elser v Macrotron* [1991] ECR I-1979, para. 32

⁴¹ S.D Anderman, *EC Competition Law and Intellectual Property Rights - the Regulation of Innovation*, (1st edition), Oxford, Oxford University Press 1990, p. 203.

⁴² CJEU, Case C-280/08 *Deutsche Telekom AG v Commission* [2010] ECR I-000

4.3 The Special responsibility not to distort competition

Article 102 TFEU suggests that an undertaking will only infringe the provision if it is in a dominant position and that position is abused. The provision does not make any precise reference to different types of dominance; however from the theory that abuse is an objective concept the CJEU has developed the notion of special responsibility. This is conferred on all companies that are considered “super-dominant”, i.e. companies with a very high market share percentage.⁴³ It will be recalled that the base concept of article 102 TFEU suggests that as long as a dominant undertaking acts within the boundaries of competition on the merits it will not be scrutinized under the provision. The special responsibility doctrine has however placed a more burdensome or comprehensive obligation on affected undertakings not to undertake certain course of conduct.⁴⁴ Accordingly an action might be regarded as abusive if the outcome is that the dominant undertaking is able to strengthen its dominant position on the market because that would inevitably diminish competition on the market as a whole, since the company has such a large market share.⁴⁵ The CJEU supports the doctrine from previous competition conditions, which holds that the function of competition is an overarching goal. The ability to compete is thus severely reduced for the “super-dominant” company, i.e. they are not allowed to take any actions that would increase their market share. This doctrine has also been applied to undertakings that are active in a monopolistic or oligopolistic market.⁴⁶ Thus there is a difference between different types of dominance, a company can therefore be held responsible for abuse even if the action would normally be within competition on the merits, and they are only allowed to maintain their current position on the market, not to strengthen it.

⁴³ Case C-333/94 P *Tetra Pak II* [1996] ECR I-5951.

⁴⁴ J Goyder, A Albros-Llorens, *Goyder's EC Competition Law*, (5th edition) 2009, Oxford University Press, page 301.

⁴⁵ GC, Case T-83/91 *Tetra Pak International SA v Commission* [1994] para 114.

⁴⁶ CJEU, Case C-12/76 *United Brands v Commission* [1978] ECR 207.

4.4 Exclusionary and exploitative abuses

There are two types of abuses covered by article 102 TFEU, exclusionary and exploitative practices. Exclusionary conduct was first brought up in the landmark case of *Hoffman La-Roche* and it consists of a dominant firm which seeks to use its market power to impact and change the structure of the market by excluding competitors and thus weakening the competitive environment. There exist a number of ways to do so, the dominant undertaking can raise costs for its competitors, refuse to deal with other undertakings or deny them access to essential facilities.⁴⁷ While the wording of article 102 TFEU suggests that it is primarily aimed at exclusionary conduct it also incorporates exploitative actions. Inferring unreasonable terms or conditions or charging unwarranted prices these types of abuses are often aimed directly at the customer or consumer. These actions are often done in combination; by successfully implementing an exploitative strategy the dominant undertaking is in a better position to exclude other competitors and thus weakening the competitive environment on the market. The landmark case of *Michelin I*⁴⁸ is often considered the strongest statement made by the CJEU concerning exclusionary behavior. It summarizes previous jurisprudence and creates a clear statement detailing the broad application of article 102 TFEU. From this statement three important elements can be deducted.

The first rule targets actions that will create structural weaknesses in the internal market. Thus it prohibits actions by a dominant undertaking that would drive out existing competitors or denying entry for potential competitors. Such action will be viewed as *prima facie* abuse by the EU judiciary.

The second ruling places a burden of proof on the Commission to show that the methods used to achieve exclusion are different from those governing

⁴⁷ J Goyder, A Albros-Llorens, *Goyder's EC Competition Law*, (5th edition) 2009, Oxford University Press, page 315 and S.D Anderman, H Schmidt, *EC Competition Law and Intellectual Property Rights - the Regulation of Innovation*, (2nd edition) 2011, Oxford, Oxford University Press, p. 75.

⁴⁸ Case 322/81 *Michelin v Commission*. ECR 2015 [1983].

normal competition on the basis of traders' performance. Of note is that this is not to be confused with normal commercial practice.⁴⁹

The last rule is the nature of evidence that is required to establish that an undertaking is interfering with the competitive process. The CJEU applies a *per se* interpretation to article 102 TFEU in order to act preventively.

Accordingly it is sufficient to show that the action gives rise to a risk of eliminating or impairing effective competition on the market.

4.5 Objective Justifications

Objective justifications are a concept established by the EU judiciary and give dominant undertakings a leeway to defend against article 102

TFEU.⁵⁰ The concept distinguishes between an abusive action by a dominant undertaking and conduct related to commercial interests of the same.⁵¹ It has

also been known to include the principle of proportionality.⁵² According to the EU judiciary the concept of objective justification is divided into two categories. The justification is either seen as considerations built purely on objective factors that are beyond the control of the undertaking, these factors in turn makes it more difficult for competitors or it affects the competitive climate on the market as a whole. However since it is not constructed by the dominant company it will not be scrutinized under article 102 TFEU.

Secondly the CJEU has also interpreted the justification as a public policy consideration. This includes, but is not limited to, situations that fall under article 102 TFEU and Service of General Economic Interest.⁵³

The application possibilities provided by the CJEU are fairly narrow. The case law of the Court limits the application possibilities and a clear-cut definition has not been developed, and it does not incorporate any

⁴⁹ S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition), 2011, Oxford University Press, p. 78.

⁵⁰ CJEU, Case C-27/76 *United Brands v Commission* [1978] ECR 207; Case T-30/89 *Hilti AG v. Commission* [1991]; Case 311/84 *Centre Belge d'Etudes du Marché-Télémarketing (CBEM) v CLT SA* [1985].

⁵¹ Van Bael & Bellis, *Competition law of the European Community*, (4th edition) 2005, Kluwer Law International, p. 907.

⁵² P.P. Craig and G.D. Búrca, *EU Law*, (4th edition) 2008, Oxford University, p. 1030.

⁵³ *Ibid.*

arguments for efficiency, meeting of competition and necessity. This makes it impossible for dominant undertakings to respond to aggressive competitors that are not dominant and might use strategies that would be considered abusive if they were dominant.⁵⁴

⁵⁴ Rousseva, E. *The Concept of 'Objective Justification' of an Abuse of a Dominant Position: Can it help to Modernise the Analysis under Article 82 EC?* [2006].

5 Competition law and Intellectual property rights

Competition law has often limited the rights granted by intellectual property law. This section will be devoted to giving a brief and general overview of the relationship between the two fields of law as interpreted by the EU judiciary. The explanation will be focused mainly on patent law because of its relevance to Standard Setting Organisations.

5.1 Dominance and Intellectual property law

The standard approach by the CJEU has always been that the possession and exercise of IPR does not automatically amount to a dominant position within the meaning of article 102 TFEU.⁵⁵ Thus, exclusive IPR are not equated with dominance. It will be recalled from the previous chapter that the EU judiciary uses established methods to assess dominance. When applied to undertakings with IPR the EU judiciary have narrowed the definitions of the markets and thus found undertakings with a high market share or control, this has been evident in a number of landmark cases. In *Tetra Pak II*, the CJEU found Tetra Pak to control 92% of the non-aseptic milk cartons market.⁵⁶ Similar in both *Magill* and *IMS Health* the EU judiciary concluded that the undertakings were dominant and that they held de facto monopolies in the markets related to their IPR.⁵⁷ It will be recalled that a high percentage of market share is often not in itself adequate to establish dominance. The Commission regard the market share as a preliminary indication to judge whether a company is dominant on a market.

⁵⁵ CJEU, Case 78/70 *Deutsche Grammophon Gesellschaft mbH v. Metro-SB-Grossmarkete GmbH & CO* [1971] ECR 487 para 16.

⁵⁶ Case T-83/91 *Tetra Pak International SA v Commission*. ECR II 00755 [1994]

⁵⁷ S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition), 2011, Oxford University Press, p 59.

They also examine the dynamics of the market, product differentiation, barriers to expansion and entry.⁵⁸

Intellectual Properties add a new angle when analysing actual and potential competition. The protection afforded by IPR to a product or technology affects the possibilities of substitution, both actual and potential. Thus, one must examine if the IPR protection constitutes a real barrier to entry and creates obstacles to competition. This is done by closely examining the existence of actual competition on a given market, i.e. by investigative market share and the power of the competitors. If there is product substitutability one needs to investigate the real possibilities of substitution. First mover advantage, brand name and distribution system increase dominance and may impede competing undertakings and their products in a primary market. An IPR can be associated with a dominant undertaking enjoying market power deriving from factors in addition to the IP protection against copies. In the *AstraZeneca* case, the company occupied a large portion of the market and its product Losec was the first of its kind. According to the Court Losec could compete with older medications but these could not compete with Losec. AstraZeneca was protected by its patent and brand name but its position as first mover and its financial resources were equally important in enabling AstraZeneca to gain almost total control over the market for treating gastric ulcers. It was established that the company was dominant by virtue of both its high market share and its position on the market. Furthermore, the General Court stressed that AstraZeneca increased its market power by using their patent protection as a means to pressure competitors to agree to unfavourable patent settlements.⁵⁹

If an undertaking has an unusual high market share, close to 100 per cent, potential substitutes must still be assessed. This will be done against the background of the dominant company's IPR, i.e. how much does the protection granted bar entry for competing undertakings. Thus, IPR acts as

⁵⁸ Communication from the Commission-*Guidance on the Commission's Enforcement Priorities in Applying article 82 EC to Abusive Exclusionary Conduct by Dominant Undertakings*, OJ (2009) C-45 p. 10-20.

⁵⁹ GC, Case T-321/05 *AstraZeneca* para. 261, 272, 276-286.

an amplifier for barriers to entry to potential competitors and will therefore contribute to the market share and position of an undertaking.

De facto monopoly occurs when the IPR itself acts as a barrier to entry. This was the case in the *Volvo Veng*⁶⁰ case, where design rights prevented all forms of substitution.

Intellectual property rights can also strengthen the dominance of undertakings by virtue of its technological superiority vis-à-vis its competitors. The French Government however claimed in *Michelin I*⁶¹ that such an interpretation of EU Competition Law would place a penalty on R&D and high quality products. The CJEU retained its view but once again stated that dominance in itself is not unlawful, instead it creates a responsibility for the undertaking not to engage in prohibited conduct.

5.2 The Concept of abuse and Intellectual property rights

It will be recalled that a dominant company has a special responsibility not to take any action that would weaken the effective competition on the internal market. This includes the use of IPR, thus article 102 TFEU affects the exercise of IPR, and it places limitations on lawfully acquired monopoly. The limitations listed in article 102 TFEU are limited to exploitative abuses, however through its case law CJEU has extended the abuse to exclusionary abuses against competitors. The broadened view on applicability of article 102 TFEU has virtually redrawn the border between competition law and IPR.⁶² Conflicts between the two fields of law have arisen because of it. Is it possible for IPRs to adhere to competition rules when exclusivity and the elimination of competition is an inherent part of the protection offered by IPR? Another stressed concern is to what extent the normal use of IPR constitutes competition on the merits or acts as an objective justification. Although the norm given by CJEU is that normal use

⁶⁰CJEU, Case 238/87 *AB Volvo v Erik Vng (UK) Ltd* (1988) ECR 6211.

⁶¹ Case 322/81 *NV Nederlandsche Banden-Industrie Michelin v Commission*. ECR 3461 [1983]

⁶² S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition) 2011, Oxford University Press, p 73-74.

of IPR should not conflict with competition provisions, dominant undertakings have been found to infringe the competitive process. Firms have been restrained from acquiring competing technology and been forced to license protected innovations to secondary markets.⁶³ Examining the jurisprudence of the EU courts there are differences between their applications of article 102 TFEU on primary markets on the one hand and secondary markets on the other. If a dominant firm takes advantage of the exclusivity offered by IPR for a specific product in a primary market the general rule is that they avoid scrutiny under article 102 TFEU. If the firm attempts to extend this action to a secondary market or a neighbouring market there is a possibility that such an action will be regarded as an abuse and not within competition on the merits. The protection offered by IPR does not include an extension to other markets than its primary. Thus, the same action could be judged differently depending on which market the firm aims at. It is evident that the protection of article 102 TFEU is paramount to the EU judiciary and that they are prepared to restrict the exercise of IPR if it is contrary to the requirements set forth by article 102 TFEU.

5.2.1 Abuse in a primary market

As with all legal rules, there exist exceptions to the general rules. In the landmark case of *Continental Can*⁶⁴ the CJEU questioned whether the procurement of IPR made by a dominant undertaking could be considered an abuse under article 102 TFEU. The answer was provided in the much later landmark case of *Tetra Pak I*⁶⁵. Tetra Pak controlled the market for the supply of machines for sterilizing and filling aseptic cartons including the cartons themselves, controlling 91.8 per cent of the relevant market. Desiring to stay in control, they acquired the exclusive license from a competing technology, putting an end to the competition created by it. The GCs view was that the mere acquisition of an exclusive license could not be

⁶³ GC, Case T-51/89 *Tetra Pak International SA v Commission (Tetra Pak I)* [1990] ECR II-309, Case T-69-70/89 *Magill v RTE*. ECR 485 [1991], CJEU, Case C-418/01 *IMS Health GmbH & Co OHG v NDC Health GmbH & Co KG* [2004]

⁶⁴ CJEU, Case 6/72 *Europemballage & Continental Can v Commission* [1973] ECR 215.

⁶⁵ GC, Case T-51/89 *Tetra Pak I* [1990] ECR II-309.

scrutinized under article 102 TFEU. However, they stressed that in order to apply the provisions in a correct manner the effects of the acquisition on the competitive climate in the primary market had to be taken into account.⁶⁶ Thus, it was Tetra Pak's super dominant position, not the acquisition, which made the action abusive. It contributed to strengthening the company's already strong position and prevented or made excessively difficult the entry of competition. Thus, the GC concluded that the acquiring of exclusive licenses by a dominant company in a position equal to Tetra Pak was abusive.

5.2.2 Linking primary and secondary markets

The nature of the connection required between a primary and secondary market is according to the EU judiciary dependent on the nature of the abuse.⁶⁷ A link is established if a dominant firm controls supply to a downstream market by virtue of control of the upstream market.⁶⁸ According to the EU courts, such a company could not use its dominance in order to establish itself in the downstream market without objective justifications. Another scenario occurs when the dominant firm strengthens its position in an upstream market by acting in the downstream market. The connection is created by the fact that the dominant firm is engaged in commercial activity with customers in both markets simultaneously.⁶⁹ This was applied to its greatest extent in the *Tetra Pak II* case where the CJEU concluded that the quasi monopoly possessed by Tetra Pak in one market and its dominant position on the other related market placed the company in a position where it enjoyed a dominant position on the two markets as a whole.⁷⁰ Accordingly, the CJEU could apply article 102 TFEU to Tetra Pak's conduct on the market where the company was not dominant and where the actions and the effects of that abuse were limited to said market.⁷¹ Such circumstances in

⁶⁶ Ibid para. 364.

⁶⁷ S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition) 2011, Oxford University Press, p. 89.

⁶⁸ Ibid.

⁶⁹ Ibid. p 90.

⁷⁰ CJEU, Case C-333/94 P *Tetra Pak II*. ECR I-5951 [1996] para. 27-31.

⁷¹ Ibid.

tandem justified the conclusion that Tetra Pak had a greater freedom of operation compared to its competitors, which made an examination of dominance in the secondary market redundant.⁷²

Thus applying the position of the EU judiciary, it is crucial to take into account the market context together with the type of abuse to determine the lawful use of IPR. The designation of markets is highly relevant to the existence of abuse as well as to the existence of dominance.⁷³

5.2.3 Refusal to supply and license

The CJEU quickly perceived a refusal by a dominant company as an abusive action. In *Commercial Solvents*⁷⁴ they held that the refusal to supply to a long-standing customer on the basis of that customer becoming a competitor was abusive since it would eliminate competition in the market. The ruling was further applied in *Telemarketing*⁷⁵ establishing the rule that if a refusal to supply by a dominant undertaking to an existing customer or potential competitor would force said firm out of the market on adjacent markets, that conduct would be regarded as abusive. From these cases the CJEU derived the essential facility doctrine, which governs the use of IPR.

In the *Volvo/Veng* case the CJEU held that in order for a conduct to be regarded as abusive there was a need of an additional factor coupled with the intention of eliminating competition with IPR as its revenue.⁷⁶ Thus the refusal to license IPR is not an abuse in itself; however the exercise of IPR may involve abusive conduct. Through its case law the CJEU has defined the essential facility doctrine and concluded that there exist exceptional circumstances in which an IPR owner is forced to license its IPR. These rules were also applied to differences between primary and secondary markets and through the *Volvo Veng*⁷⁷ case the CJEU developed a set of rules concerning the obligation to supply. In short, it establishes that a

⁷² Ibid.

⁷³ S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition) 2011, Oxford University Press, p 91.

⁷⁴ CJEU, Case C-7/73 *Commercial Solvents v Commission* [1974] ECR 223.

⁷⁵ CJEU, Case 311/84 *Telemarketing* (1985) ECR 3261.

⁷⁶ CJEU, Case C-238/87 *Volvo v Veng* [1988] ECR 6211.

⁷⁷ Ibid.

dominant firm is allowed to enjoy the essence of the exclusivity offered by IPR in the primary market. The Court did however place limitations on the freedom of utilizing this protection in markets where the protected product or technology was indispensable, i.e. the secondary markets or aftermarket. In the famous landmark case of *Magill*⁷⁸ the CJEU gave a solid ruling concerning the potential requirement to license out IPR. Magill brought an action against three TV companies for their refusal to license necessary, copyright protected, information that would be used to comply a comprehensive TV guide in the UK and Ireland. The case first went through the GC, where they concluded that the refusal to license prevented the production and marketing of a new product for which there was a consumer demand and thus excluding potential competition from the market in order to secure their monopoly. This went beyond the purpose of the protection offered by copyright, affecting secondary markets, and was by the GC regarded as an abuse of dominance. The opinion of AG Gulman was received with much surprise since it was contrary to the GC decision and earlier case law. The AG concluded that when a conflict between the rights given by IPR and the interest of free competition arise a balance needs to be achieved. Nevertheless, these interests were not equal according to the AG and a potential conflict should always be judged in favour of IPR. In no circumstance could one justify limitations to the protection granted by copyright, this was particularly the case when a compulsory licensing would permit products that were in direct competition with the TV companies' use of their copyright. To exploit a derivative market was normal for copyright holders and could not justify an application of article 102 TFEU. The CJEU did not agree with the AG and followed the opinion of the GC and the Commission. They ruled in favour of Magill, concluding that there was no substitute for the potential product for which there existed a consumer demand and that there was no objective justification for the refusal to license. Further, the TV companies used a *de facto* monopoly position on a primary market, constituted by an essential facility, to maintain their dominance in a secondary market.

⁷⁸ CJEU, Case C-241/91 *RTE, ITP, BBC v Commission* [1995] ECR 743.

From the *Magill* case a test was derived, which was affirmed in the *IMS Health*⁷⁹ case. Accordingly three cumulative conditions need to be fulfilled in order for an undertaking to be forced to license or supply; i) the undertaking which requests the license intends to offer, on the market for the supply of data in question, new products or services not offered by the copyright owner and for which there is a potential consumer demand; ii) the refusal is not justified by objective conditions; iii) the refusal is such as to reserve to the copyright owner the market for the supply of data on sales on products in MS concerned by eliminating all competition on that market.⁸⁰ None of the cases from the EU judiciary gives any clarity concerning the pricing of compulsory licences. The guidelines that the prices should be reasonable and non-discriminatory offer no consultation. According to doctrine there is a difference between excessive pricing under article 102(a) TFEU and reasonable and non-discriminatory pricing under article 102(b) TFEU. The limit under (a) seems to be prices that are exceptionally high that reaches outside the range of legitimate pricing under a free market. Compared to the formula regulating reasonable and non-discriminatory pricing there seems to be a necessity for applying regulatory principles to determine the concept of reasonable.⁸¹

5.2.4 Excessive pricing

Since the *General Motors*⁸² case the CJEU has regarded excessive pricing as an abuse under article 102 TFEU. When IPR enters the picture, the judiciary faces the difficulty of assessing unfair pricing with the innovators' interest of a fair return of invested funds and their right to exploit their IP. Thus, one needs to calculate the high risk-high reward that firms undertake to develop technologies; this is particularly evident in high-tech industries. There exists difficulty in assessing excessive pricing when IPR is involved, the EU judiciary will have to accept that undertakings will charge a higher price to

⁷⁹ CJEU, Case C-418/01 *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG* [2004] ECR 5039.

⁸⁰ *Ibid.* para 52.

⁸¹ S Anderman and H Schmidt, *EU Competition Law and Intellectual Property Rights*, (2nd edition) 2011, Oxford University Press, p 121.

⁸² CJEU, Case 26/75 *General Motors Continental v Commission* (1976) ECR 1367.

recover their costs, at least to some extent, for developing technologies that are protected, and otherwise it would remove the financial incentive for companies to develop new technologies. This does not mean that undertakings in a dominant position, with IP protected products and technologies, are allowed to charge any price they like. The possibility of scrutiny under article 102 TFEU is one way to restrict excessive pricing, however wide margin should be given to the undertakings to do so.

6 The Specific conduct

Regarding abuse of dominance in the specific situation considered in this thesis, patent hold-up or patent-ambush, licensing under FRAND terms, and non-practicing entities, little to no case law can be found. In fact under EU Competition law the issue has only been addressed two times by statements of objections made by the Commission. I will in this section give a summary of the present state of EU law in the relevant areas.

6.1 Patent ambush and the Rambus Statement: background

Patent ambush, or patent hold-up, is one of the most notable dangers inherent in SSOs. An SSO selects a technology from a myriad of alternatives and before a standard adopts one it runs the risk to be exposed to a patent ambush. Before the lock-in on a technology a patentee has no more power than any other potential supplier and it's thus unable to demand any other prize than a competitive.⁸³ The selection of a patentee's technology and the following lock-in provides the company with a significant gain in market power. Because of the protection afforded to the technology the patentee can now impose licensing fees much higher than what would be possible in a competitive market. The added price can be placed either on the customer in form of high royalties or it will be placed on the consumer in the form of higher buying price.⁸⁴

Nor is it easy to avoid this once the technology is selected because of the idea of SSO. Industry actors begin to adopt the standard, making a change of technology excessively difficult. This is particularly the case in industries with high R&D costs. Manufacturers would be forced to invest enormous amounts of money in case they would have to switch technology because

⁸³ S Anderman, A Ezrachi, *Intellectual Property and Competition Law: New Frontiers*, (1st edition) 2011, Oxford University Press p. 359.

⁸⁴ Ibid.

lock-in of a technology arises from the accumulation of investments made at each stage.⁸⁵

Rambus is a US Company incorporated in Delaware USA; their principle place of business is Los Altos California. Their primary business consists of designing, developing and licensing high bandwidth chip connection technologies for computers, consumer electronic and communication products.⁸⁶ The statement of objections concerns Dynamic Random Access Memory chips (DRAM). These are used in computer systems and a wide range of electronic products that require temporary storage space. Joint Electron Device Engineering Council (JEDEC), a US based SSO, has standardized this technology. Rambus owns and is claiming patents, which are used in the technology adopted by the JEDEC standards. Thus all undertakings bidding to manufacture synchronous DRAM chips must acquire a license from Rambus or contest its proclaimed patent rights.

6.1.1 The Commission's Statement of objection

The Commission issued a statement of objection in July 2007, claiming that Rambus had infringed article 102 TFEU by its deceptive conduct.⁸⁷The alleged abuse consisted of Rambus claiming unreasonable royalties for the use of certain patents for DRAM chips. The Commission held that Rambus had engaged in intentional deceptive conduct in the context of a standard setting process. According to the Commission the abusive conduct consisted of Rambus not disclosing the existence of patents and patent applications. These patents later became relevant to the adopted standard according to the Commission.

This is the first instance where the Commission dealt with this type of behavior under EU Competition law. The Commission believed that without the patent ambush Rambus would have been unable to charge as high royalties fees as they did. Thus the SSO, JEDEC, would have excluded the technology in question if it had prior knowledge about Rambus patent claims or at least it would have required Rambus to commit to license on

⁸⁵ Ibid. p. 360.

⁸⁶ MEMO/07/330, Press Release of 23.08.2007.

⁸⁷ Ibid.

FRAND terms for any essential patents in their possession. Because of Rambus' actions the Commission held that they abused their dominant position on the market, created by including their technology in the standard and subsequently claiming unreasonable licensing terms for the use of their patents.

According to the Commission's statement, an appropriate remedy would be that Rambus charged "a reasonable and non-discriminatory royalty rate...the precise amount of which should be decided having regard to all the circumstances of the case".

In the end Rambus conformed to the objection, licensing out their patents in compliance with the JEDEC standards for five years. As part of the remedy Rambus also agreed to not charge any royalties for chip standards that were "locked-in" while Rambus was still a JEDEC member. This was combined with a commitment to charge a maximum royalty rate of 1.5 per cent for the later generations of JEDEC RAM standards.⁸⁸ After Rambus remedied its deceptive conduct the Commission dropped their objection, holding that the commitments were adequate to correct the behavior.

6.2 FRAND Commitments and Qualcomm statement: background

To address the concerns and issues created by the risk of a patent ambush many SSOs have adopted policies that govern the SSO members IPR interests. These commonly hold that a company should first disclose all their patent interests related to the standard, and secondly if they are in the possession of essential patents commit to license them on FRAND terms. Through this requirement SSOs are able to circumvent the dangers of patent ambushes and compensate for the increased market power afforded to a company in the possession of essential patents. The FRAND commitment also serves as a responsibility to a company, accepting the power and obligation that follows with it to provide their innovations to a competitive price. The coin is two-sided however; the committed company also receives

⁸⁸ IP/09/1897, Press release of 09.12.2009.

benefits, among these is no competition with another technology once their own is incorporated in a standard.

Qualcomm Incorporated is a US based manufacturer of chipset used in mobile phone technology. They are in the possession of IPRs in the Code division multiple access (CDMA) and Wideband Code Division Multiple Access (WCDMA) standards for mobile telephone technology. The WCDMA standard is a part of the third generation (3G) mobile phone technology standard in Europe.

6.2.1 The Commission's Statement of objection

Following its statement of objection regarding Rambus conduct, the Commission soon issued another one directed against the behavior of Qualcomm.⁸⁹ This was done after opening antitrust proceedings following complaints made by other mobile phone and chipset manufacturers. According to the statement Qualcomm infringed article 102 TFEU by the terms which they licensed its essential patents to the WCDMA standard for 3G mobile communications. The investigation conducted by the Commission focused on Qualcomm's dominance and the licensing terms and royalties. According to the Commission a finding of exploitative practice and abuse of dominant position in the WCDMA market under article 102 TFEU may depend on whether the royalty terms imposed by Qualcomm were in breach of its FRAND commitment. Thus this statement focused on whether Qualcomm failed to license on the FRAND terms they were committed to, not whether they had failed to disclose information about patent interests. The complaints submitted to the Commission were grounded upon the understanding that "the economic principle underlying FRAND commitments is that essential patent holders should not be able to exploit the extra power they have gained as a result of having technology based on their patents incorporated in the standard...The complaints also alleged that charging non-FRAND royalties could lead to final consumers paying higher handset prices, a slower development of the 3G standard, and all the related negative consequences for economic efficiency associated

⁸⁹ MEMO/07/389, Press Release of 01.10.2007.

with inhibited growth of the standard. In addition, the complainants alleged that this behavior could negatively affect the standard setting process more generally as well as the adoption of the future 4G standard”.⁹⁰

As in the Rambus situation Qualcomm corrected their conduct and made amends after the Commission published their objection enabling the Commission to close the formal proceedings, noting that the dispute addressed important issues about the pricing of technology in standard setting environment.⁹¹

6.3 Non-Practicing Entities

In the past patents in the Information and Communications technology (ICT) market that have been essential to market standardization has generally been owned by undertakings active in both R&D and the supply to customers and consumers. Commonly the royalty rates charged by the owners were low or non-existent. For instance; the adoption of the second-generation mobile standards (GSM).⁹² Recent changes in the ICT market have witnessed the emergence of a new strategy which seeks to consolidate market power through standardization. Enterprises are started to obtain patents that are assumed to be essential to a standard. This is done in order to obtain substantial royalties from market actors. These are the Non-Practicing Entities (NPEs), and they do not supply the market with goods or services. Neither do they rarely provide any innovations or further the development of products and technology. Their main goal is the taxation of the industry with royalty demands after a standard has been chosen and the necessary technology has been locked in. They circumvent FRAND commitments by not being members of SSOs and acquire patents from undertakings in financial trouble after the adoption of a standard. Thus exploiting the concept of patent-ambush inherent in SSOs, but without direct deceptive conduct.⁹³

⁹⁰ Ibid.

⁹¹ MEMO/09/516, Press Release of 24.11.2009.

⁹² S Anderman, A Ezrachi, *Intellectual Property and Competition Law: New Frontiers*, (1st edition), 2011, Oxford University Press, p. 375.

⁹³ Ibid, p. 375-376.

6.3.1 Defending against NPEs

Applying EU Competition Law to the conduct of NPEs might prove an effective way to limit their abuse of the standard setting system. Both article 101 TFEU and 102 TFEU are able to place restraint upon such undertakings. For the purpose of this thesis attention will be given only to article 102 TFEU.

It will be recalled from previous chapters that article 102 TFEU is applicable to the unilateral behavior of an undertaking in a dominant position in a specific market. It is further generally accepted that the decisions and lock-in by SSOs can confer market power on a company, if their patent is incorporated in a standard and is essential for its implementation.⁹⁴

Accordingly the provisions in article 102 TFEU are applicable once the market power of a company is strengthened by a SSO decision and the undertaking acquires a special responsibility not to allow its conduct to impair genuine undistorted competition on the market.⁹⁵ Thus the essential patent must become available for companies in downstream markets in order for them to manufacture products that comply with the industry standard. The requirement placed by article 102 TFEU not to abuse a dominant position entails, inter alia, an obligation not to directly or indirectly impose unfair purchases or selling prices or unfair trading conditions and applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive advantage. This is almost a mirror image of the commitment to license essential patents on FRAND terms, thus removing the advantage of NPEs not being part of an SSO. An abuse of a dominant position gained by the possession of essential IPR in a standard setting environment has even been recognized to constitute an infringement of article 102 TFEU.⁹⁶

⁹⁴ C Madero Villarejo, N Banasevic, *Standards and market Power*, (2008), Global Competition Policy 3.

⁹⁵ CJEU, Case 322/81 *NV Nederlandsche Banden-Industrie Michelin v Commission* (1983) ECR 3461 para 57.

⁹⁶ Communication from the Commission, Guidelines on the applicability of article 101 of the Treaty on the Function of the European Union to horizontal co-operation agreements, para 284.

6.4 The future of FRAND

Almost every SSO applies rules that demand its members to disclose any patent interests that are essential to the standard. As previously detailed NPEs have the possibility to avoid this commitment. According to doctrine a development of FRAND commitments to further the protection of competition, could entail that the obligation to license on FRAND terms should travel with the patent.⁹⁷ Accordingly, should a NGE acquire a patent that is essential for a standard and the firm is or at least should be aware of this, then the FRAND commitment should travel. According to the Commission such a commitment would benefit competition as a whole. Otherwise the pro-competitive effects of standard settings would be eliminated to a large extent since the FRAND commitment would no longer be applicable.⁹⁸ According to the Commission any relevant FRAND commitments should travel, because the issue of reasonable licensing fees should not be made dependent on whether the current patent owner is a member of the SSO. Thus the NPEs would be forced to accept FRAND terms and conditions in order to adhere to competition rules. The Commission has also supported this in their Horizontal Guidelines, holding that “To ensure the effectiveness of FRAND commitment, there should also be a requirement on all IPR holders who provide such a commitment to take all necessary measures to ensure that any undertaking to which the IPR owner transfers its IPR measures to ensure that any undertaking to which the IPR owner transfer its IPR (including the right to license that IPR) is bound by that commitment”.⁹⁹ The transferred obligation should allow the acquirer to license on the same rate as the previous owner committed to, rates above this should be considered unfair.¹⁰⁰

⁹⁷ S Anderman & A Ezrachi, *Intellectual Property and Competition Law: New Frontiers*, (1st edition) 2011, Oxford University Press, p. 380.

⁹⁸ Ibid. p. 381, *See also*, European Commission press release, *Antitrust: Commission welcomes IPRCom's public FRAND declaration*.

⁹⁹ Communication from the Commission, Guidelines on the applicability of article 101 of the Treaty on the Function of the European Union to horizontal co-operation agreements, para 286.

¹⁰⁰ Ibid. at *supra* note 97.

Defining FRAND prior to formal adoption for an increase in transparency is an alternative solution to diminish the risks inherent in a standard setting process. If SSOs were able to increase the transparency and require that all participants agree to defined terms, such principles could be applied *ex post*. It would then serve as a benchmark for charging suitable rates for essential patents.

7 US Antitrust Law and standard setting

While the Commission's statement of objections against Rambus and Qualcomm never reached the EU judiciary and ruled upon, the courts of the US gave rulings on similar issues. To this end the US courts applied two legal acts, Section 2 of the Sherman doctrine and Section 5 of the Federal Trade Commission Act (FTCA).

7.1 The Sherman doctrine

The Sherman doctrine was created over 100 years ago in order to address the procurement and maintenance of monopolization through anticompetitive conduct, thus it is the US equivalent of article 102 TFEU. The dangers inherent with monopoly power were addressed early in its jurisprudence, to possess the ability to fix prices and injure the public, enabling limitations of production and the danger of deterioration in product quality, as a consequence of monopolistic control over production and sale.¹⁰¹ As in the EU, the US courts have however never declared the position of monopoly as unlawful per se. The legal system has recognized that a position of monopoly can be gained by superior skills and products and recognizes that the acquisition of a monopoly position is often the success of a company's business strategy in a competitive market.¹⁰² Current case law recognizes monopolization as a type of strategic behavior of an undertaking. Such behavior may be deemed unlawful when the undertaking seeks to obtain or maintain monopoly power.¹⁰³ Anticompetitive conduct aimed at gaining monopoly power exposes consumers to the price, output and innovation effects that can result from monopoly. In contrast the protection of a monopoly position prevents rivals from entering or effectively competing on a specific market.

¹⁰¹ US case, *Standard Oil Co. v. United States*, 221 U.S: 1,52 (1911).

¹⁰² US case, *United States v. Aluminium Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945).

¹⁰³ H Hovenkamp, *Federal Antitrust Policy*, (3d edition) 2005, p. 269.

According to the US Supreme Court section 2 of the Sherman act is aimed towards behavior that unfairly manage to destroy the competitive climate, not against conduct that is competitive.¹⁰⁴ The provision holds that “*Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among several States, or with foreign nations, shall be deemed guilty of a felony...*”

Accordingly the provision is applicable to all unilateral conduct made by undertakings and covers a vast range of behaviors. Its main objective is to counteract injuries to the competitive climate accomplished by excluding rivals. These damages occur when the dominant undertaking seeks to obtain power over price or influence some other aspect of competition. Thus the exclusionary behavior is often indirect, by excluding rivals or impairing competitors’ ability to compete effectively.¹⁰⁵ As with article 102 TFEU, distinguishing anticompetitive behavior from effective, sometimes brutal but legal competition, is difficult because the two types of conduct are often similar. This has affected the US Supreme Courts’ recent rulings under Section 2 of the Sherman act, rooted in concerns of legal uncertainty or enforcement errors that may discourage pro-competitive conduct.¹⁰⁶

The provision addresses three types of conducts; monopolization; attempted monopolization and conspiracy. For the purpose of this thesis only the two first offenses will be discussed. The monopolization felony is the core of the Section 2 offenses. Since the landmark case of *United States v. Grinnell Corp* the test consists of two cumulative elements; the first is the possession of monopoly power in the relevant market and the second is the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen or

¹⁰⁴ US case, *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 458 (1993)

¹⁰⁵ A I Gavil, W E Kovacic & J B Baker, *Antitrust Law In Perspective*, (2002) p. 45.

¹⁰⁶ US case, *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co*, 127 S. Ct. 1069, 1078 (2007).

historic accident.¹⁰⁷ In reality monopoly power refers to the market power of the undertaking, i.e. the ability to increase prices higher than the undertaking could charge in a competitive market. Further evidence of monopoly power has been known to include the undertakings' market share and barriers to entry in the relevant market.¹⁰⁸ The second aspect of the test examines if there exists an element of anticompetitive behavior that enables the undertaking to gain or maintain a position of monopoly power.

Attempted monopolization requires three cumulative requirements in order to be proven. 1) The undertaking has engaged in predatory or anticompetitive behavior, 2) with a specific intent to monopolize and 3) with a high probability of attaining monopoly power.¹⁰⁹ The US courts have recognized that a certain type of behavior that is illegal if the undertaking is already regarded to have a position of monopoly power might be legal for an undertaking aspiring to be a monopolist because certain types of behavior only gains anticompetitive effects if an undertaking already possesses monopoly power.¹¹⁰ Furthermore case law holds that the specific intent to monopolize does not include the intention of an undertaking to offensively compete with others.¹¹¹ Instead it is aimed at undertakings with the explicit goal to destroy or damage the competitive climate or accumulate monopoly power.¹¹² The high probability requirement to gain monopoly power uses the same elements as used in assessing monopoly power in monopolization claims.¹¹³ Of note is that case law holds that the high probability of gaining monopoly power can be shown with less market power than what is necessary for ascertaining actual monopoly power.¹¹⁴

7.1.1 The Federal Trade Commission Act

According to section 5 of the FTCA the Federal Trade Commission (FTC) can bring proceedings against “unfair methods of competition”, which

¹⁰⁷ US case, *United States v. Grinnell Corp*, 384 U.S. 563, 570-71 (1966).

¹⁰⁸ K L Grimm, *General Standards for Exclusionary Conduct*, (2008).

¹⁰⁹ US case, *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993).

¹¹⁰ US case, *United States v. Dentsply International Inc.*, 399 F.3d 181, 187 (3d Cir. 2005).

¹¹¹ US case, *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 459 (1993).

¹¹² US case, *Times-Picayune Public Co. v. United States*, 345 U.S. 594, 626 (1953).

¹¹³ US case, *United States v. Microsoft Corporation*, 253 F.3d 34, 81 (D.C. Cir. 2001).

¹¹⁴ US case, *McGahee v. N. Propane Gas Co.*, 858 F.2d 1487, 1505 (11th Cir. 1988).

includes behavior that infringes section 2 of the Sherman Act.¹¹⁵ The ability of the FTC to address legal issues is broad; according to the US Supreme Court it reaches beyond the scope of the federal antitrust laws; and the US Supreme Court even gave the FTC the power to prohibit behavior deemed unfair and deceptive in their effect on consumers, not regarding the nature of the conduct or its effect on competition.¹¹⁶

In the absence of evidence of anticompetitive effects on the market Section 5 does not, or at the minimum should not, sanction the commercial conduct of an undertaking. Thus, a claim made under Section 5 necessitates as a minimum some form of evidence of oppressiveness caused by the behavior in question. Section 5 cannot be applied by the FTC to create a favorable duty to act in a situation where the federal antitrust law expressly provides that no such duty exists.¹¹⁷

7.2 The Rambus saga

The background and facts in the US case are similar to the EU counterpart but will be summarized here. Rambus is in the business of developing, patenting and licensing memory technologies. To this end Rambus is in the possession of essential patents and in the process of gaining pending patents related to the DRAM technology. The DRAM technology is standardized through JEDEC, which Rambus was a previous member of. According to JEDEC rules, members had to disclose any patents or pending patents that might be involved with the standard process JEDEC was undertaking.¹¹⁸ The rules further added that the standards would not incorporate protected technology if the owner did not make assurances to license it, either royalty free or on reasonable and non-discriminating (RAND¹¹⁹) terms.¹²⁰

¹¹⁵ S Anderman & A Ezrachi, *Intellectual Property and Competition Law: New Frontiers*, (1st edition) 2011, Oxford University Press, p. 325.

¹¹⁶ Ibid. at p. 326, See also US case, *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 241, 92 S Ct 898 (1972).

¹¹⁷ S Anderman & A Ezrachi, *Intellectual Property and Competition Law: New Frontiers*, (1st edition) 2011, Oxford University Press, p. 328.

¹¹⁸ US case, *Rambus Inc., v. FTC*, 522 F.3d 456, 380 (D.C. Cir. 2008).

¹¹⁹ RAND is the US equivalent of the EU FRAND terms.

¹²⁰ Ibid. at *supra* note 118.

The FTC alleged that Rambus had deceptively failed to inform JEDEC of its patent interests, finding such conduct monopolistic and infringing Section 2 of the Sherman act. The FTC further added that Rambus conduct also fell within the scope of unfair method of competition under Section 5 of the FTCA, concluding that Rambus deception enabled it to gain a monopoly through standardization of its patented technology and the possibility of avoiding limits on licensing fees that JEDEC would have imposed if knowledge of the patents had been disclosed.¹²¹ Thus the FTC focused on the monopolization, concluding that Rambus' deceptive behavior significantly increased its acquisition of monopoly power.

7.2.1 The Courts' ruling

Rambus never disputed the FTCs claim that the possession of their patents gave them monopoly power on the relevant market. Thus the question for the Court of Appeals of the District of Columbia centered on whether Rambus engaged in unlawful exclusionary conduct. According to the FTC, had Rambus complied with the JEDEC rules the standard would have either excluded their technology or demanded insurances for the license fee, however the FTC never managed to determine which was more likely. Furthermore the FTC itself proved that even with the knowledge of Rambus' patent claims it was likely that JEDEC still would have selected their technology. Accordingly the court switched their focus and questioned whether preventing JEDEC from obtaining promises of RAND licensing constituted anti-competitive conduct under Section 2 of the Sherman act.¹²² The court was not convinced by the FTCs argument, stating that a deceptive conduct must have an anticompetitive effect in order to fall within the scope of a monopolization claim. Raising prices, even through malicious behavior, does not alone harm competition in the monopolized market.¹²³ Furthermore the FTC had explicitly recognized that JEDEC would probably have standardized Rambus technology even if they had disclosed their patent interests. Accordingly the loss JEDEC suffered was the

¹²¹ Ibid. at p. 4-7

¹²² Ibid. at p. 17-23

¹²³ US case, *NYNEX Corp., v. Discon Inc.* 525 U.S. 128 (1998).

possibility to secure RAND terms for licensing fees, which is not equivalent to causing harm to the competitive climate or competing technologies. Neither did the court accept the FTC argument that non-disclosure to an SSO has the possibility to create excess royalties that could distort competition in the downstream market. Thus according to the court the FTC failed to show that Rambus behavior infringed Section 2 of the Sherman act. Neither did the FTC claim under Section 5 of the FTCA gain any success with the court, questioning the strength in a standalone Section 5 accusation. Called into question were the weak findings of the FTC relating to what extent JEDEC required its members to disclose and what Rambus had failed to disclose.

7.3 The Qualcomm saga

Both Qualcomm and Broadcom are active in the mobile telephone market and both have technology related to the third-generation (3G) of these products.¹²⁴

The UMTS was developed by ETSI and its Standard developing organizations (SDO) counterpart in the US after lengthy discussions concerning suitable equipment and technology. Qualcomm supplied certain essential technologies and owned essential patents included in the final standardized technology selected by ETSI. Although ETSI required its members to commit to FRAND licensing terms neither it nor other SDOs defined the FRAND terms. Broadcom claimed that Qualcomm was a member of ETSI, and other relevant SDOs, and that they had promised to abide to the rules set forth by the SDOs, adding that the technology possessed by Qualcomm was selected first after they had committed to license it on FRAND terms. According to Broadcom, Qualcomm has monopolized specific areas of this market through deceptive behavior and the predatory acquisition of a potential rivaling technology infringing Section 2 of the Sherman act.¹²⁵

¹²⁴US case, *Broadcom Corp. v. Qualcomm Inc.* 501 F.3d 297 (3rd Cir. 2007) p. 4.

¹²⁵ Ibid. p. 4-6.

Broadcom's accusation also alleged that through deceptive behavior by Qualcomm, ETSI included their technology in the UMTS standard but subsequently violated the agreement by licensing it on non-FRAND terms, thus violating antitrust law by intentionally gaining increased monopoly power. The accusation also claimed that Qualcomm breached their commitments by charging a higher price from competitors and customers using chipsets not manufactured by Qualcomm. Because of their high monopoly power, a 90 per cent share in the CDMA market, the discriminatory pricing gave other companies no other option than to buy chipsets from Qualcomm.¹²⁶

Accordingly the complaint asserted inter alia that the conduct of Qualcomm breached Section 1 and 2 of the Sherman act and Section 3 and 7 of the Clayton act, for the purpose of this thesis only the Section 2 infringement will be discussed.

7.3.1 The Courts' ruling

The U.S Court of appeal third circuit began with establishing the jurisprudence of the Sherman act, holding that the ability to control prices and exclude competition on the market is evidence of monopoly power. This can either be proven by direct evidence of supra-competitive prices or restricted output through the structure and composition of the relevant market. It is further necessary that the acquisition or possession of monopoly power must have some anticompetitive effects. Conduct which only harms competitors but does not affect the competitive climate itself is not regarded as such. The court also recognized the ability of patent hold-ups to confer market power once a standard was selected, which incorporated the protected technology of a company. To combat the risks posed by patent hold-ups the court held that most SDOs require commitments from undertakings supplying essential technology, i.e. RAND or FRAND licensing terms. Thus these commitments are a crucial factor for

¹²⁶ Ibid.

SDOs when evaluating suitable technologies, and it further serves as an indicator of the costs of implementing a potential standard.¹²⁷

According to the court a standard eliminates alternative technologies, thus the selection of a patented technology removes the alternatives when adopting the standard. Accordingly the value of the patent is drastically enhanced compared to its value outside a standardization process, even requiring competitors to use another firm's technology in order to comply to the standard. The court was of the opinion that FRAND or RAND commitments are a crucial safeguard against the misuse of monopoly power. The court concluded the case by ruling that in a consensus-oriented private SSO a patent owner's deceptive promise to agree to license essential technology on FRAND terms, combined with the SSOs reliance on such a promise when selecting the technology and the ensuing breach of that promise is actionable anticompetitive conduct. Of note is that the court was of the opinion that deceptive FRAND commitments and deceptive non-disclosure of patents both could result in anticompetitive effects, thus ruling against the judgment given in *Rambus*.¹²⁸

¹²⁷ Ibid. at p. 12-20.

¹²⁸ Ibid. at p. 22-25.

8 Analysis

Previous chapters have been dedicated to providing an introduction to EU competition law in relation to conduct found only in a SSO, conduct which would amount to abuse of dominance. The present state of law has been outlined by existing case law and the Commissions' statement of objection. An understanding of US antitrust law and the development of the specific conduct has been given. A detailed conclusion will now be given to compare the two legal systems and to provide the current position of EU law.

8.1 The US approach and Commission objections

First one must understand the differences between the two sets of competition law present in the thesis. It is important to understand the scope of the two jurisdictions when analyzing the conduct in question.

The wording of article 102 TFEU and Section 2 of the Sherman act suggests different approaches to the same dilemma. While article 102 TFEU prohibits any abuse of market power by a dominant undertaking, Section 2 of the Sherman act prohibits monopolization, or the attempt to monopolize a specific market. Accordingly, the difference is that EU competition law wants to regulate the behavior of dominant firms rather than the effect of the behavior, while the Sherman act aims at the exclusionary effects of the actual conduct. Accordingly, conduct that lacks exclusionary effects will not infringe Section 2, while that same conduct can amount to an abuse of dominant position under EU law since the judiciary of EU does not demand proof of an actual effect, the probability of harm against the competitive climate on a market is enough. According to the US Supreme court the purpose of Section 2 is the protection of the public from the failure of the market, thus the provision is not aimed against competitive conduct, but rather against conduct that unfairly harms or destroys the competitive climate. In effect US antitrust laws focus on exploitative abuses. As such

Section 2 serves to prevent consumer harm. To be held liable requires proof that the conduct is producing anticompetitive effects in the form of exclusion which in turn harms consumers. The examination of consumer harm does not occur under article 102 TFEU, the risk of reduced competition is enough, however such harm is one common consequence of reduced competition. This judgment is made by the Commission, and is later ruled on by the EU courts. Furthermore it is difficult for undertakings to win a competition case of substantive elements since the Commission both acts as a prosecutor and fact finder in the same case. EU competition law also strives to unify the market, thus it always has the aim of single market integration.

The differences between the Rambus case from the US courts and the statement of objection from the Commission are very great. When the case was first brought to light in the US it pitted two federal organizations against each other, the US patent office and the FTC. The former tasked with the creation of monopolies and the latter with the prevention of antitrust actions. For the FTC it quickly became a new type of antitrust proceeding, there existed no normal infringement they could claim Rambus was violating, i.e. breach of contract or fraud. Thus they had to find a new infringement under antitrust law and the question of concealing patent interests versus disclosing the information was brought up. According to the D.C. Circuit the first failure of the FTC was the lack of definition on part of JEDECs FRAND commitments and what it entailed. Even though the rules are vague such an interpretation might damage the SSO, since it becomes easier for undertakings to act deceptively. A remedy would be more detailed disclosure rules to prevent such actions, or at least such actions would then be regarded as antitrust violations. Neither did the D.C. Circuit believe that the lock-in of a technology in a SSO and the subsequent disclosure coupled with high royalty rates constituted an antitrust violation. According to the D.C. Circuit such an action would only be regarded as a violation if one could prove that the technology would not have been selected if knowledge of patent interests had been disclosed. Accordingly Rambus failure to disclose patent interests was not to be considered as a fraud or deceptive

conduct because there was no consumer harm to the market. Section 2 demands that the exclusionary effects need to harm consumers but the D.C. Circuit found that this was not the case. The ruling fails to acknowledge that such a deceptive conduct, in the form of a patent hold-up, damages the competitive process between competing technologies. Although the conduct and subsequent damage still is limited between undertakings the resulting gain in monopoly power consequential to the deceptive conduct harms the consumer base as well. Without restraints Rambus would be able to charge high royalty fees which would affect the end retail price, thus constituting a market failure. The requirements placed on FTC to show that the Rambus technology would have been excluded offers little comfort. A company is always in the position to claim that their technology might have been chosen even if they disclosed their patent interests, nullifying the small leeway given to the FTC. The FTC or SSO will have a hard time proving otherwise, it would require an investigation on the most suitable technology and ruling on such a high-tech subject is beyond the competence of the court.

Furthermore there is an inherent problem in this burden, predicting a wide range of considerations and outcomes with a wide variety of participants is an excessively difficult threshold to overcome. Thus the D.C. Circuit demands that the claimant proves the un-provable. In essence such reasoning promotes patent owners to withhold patent interests to gain higher royalties. Thus the ruling presents SSOs with a dangerous outcome. The attractiveness of licensing on competitive terms is severely reduced. In turn, participating companies might diminish; eliminating both the innovation and consumer advantages gained by standard setting processes. If innovation is not eliminated it might be severely reduced, SSO might choose older technology that is no longer protected in order to avoid potential patent-hold ups. The ruling can even have so far reaching consequences as to affect downstream markets or secondary markets with high royalty demands. It is evident that these outcomes have the risk to severely reduce consumer and social welfare and would therefore infringe Section 2 of the Sherman act. While the D.C. Circuit failed to realize the threat posed by conduct inherent in SSOs the Commission of the European

Union did not.¹²⁹ While the case was never ruled upon a settlement was reached. It is highly likely that both the Commission and Rambus realized that the different wording of article 102 TFEU compared to Section 2 of the Sherman act and the different requirements and purposes of respective competition legislation, would allow for a different outcome than in the US. Coupled with the fact that patents only apply for a limited time and that Rambus would have to litigate in all EU member states for their patent claims and alternative technologies are constantly developed, Rambus remedied its conduct as described above.¹³⁰ The ruling is thus very different from a potential outcome in an EU court. The construction of article 102 TFEU is much more suited to encompass conduct that only requires a potential threat to the competitive process.

However a very surprising ruling, the *Qualcomm* judgment from the Federal Third Circuit is contradictory to the ruling in *Rambus*. Although the facts of the cases differ one could claim that the end result of both actions, patent hold-up and failure to commit to FRAND, is almost the same. The D.C. Circuit never found, or at least placed a very high burden of proof on the plaintiff, that patent hold-ups had anti-competitive effects, the Third Circuit were of the opposite mind. Accordingly they found a connection between the duty to disclose and the Section 2 of the Sherman act. The argument that the IPR policies from a SSO need to be clear and transparent was cast aside in favor of members' understanding of what needs to be disclosed. The court in *Qualcomm* focused on the conduct that took place during the standard setting process, the same as the D.C. Circuit with the difference that an SSO should avoid patent hold-ups or the benefits of standard settings would be lost. This was contrary to the *Rambus* situation where the court held that the company could not be held responsible for ambiguity. In *Qualcomm* the court also recognizes the process of standard selection and the consequences it brings. By thoroughly relating the process to established principles of antitrust law the court was able to conclude an infringement of

¹²⁹ One could claim that the D.C. Circuit did not fail to realize the threat but instead thought the conduct was far away from the wording and purpose of Section 2 of the Sherman act to infringe it. However this theory seem to me quite weak, the judges should realize the full extent of the actions allowed or prohibited and how it relates to the written law.

¹³⁰ P. 36 and 47.

Section 2 of the Sherman act. The reasoning by the Third Circuit is unquestionably more in tune with the potential approach taken under EU competition law. In its statement of objection the Commission recognizes once again the hidden dangers against competition with SSOs. Qualcomms' conduct is held to infringe both competition law and the economic benefits of standard setting. The Commission's findings suggest that not only do they apply established principles of law but also adapt the benefits unique to SSO to fit within the scope of article 102 TFEU and a subsequent threat to such benefits is a distortion of competition, both for undertakings and consumers.

The US and EU approach are both very different and very similar, depending on the jurisprudence used. Despite the difference in time, neither the *Rambus* nor the *Qualcomm* cases have precedence, creating a most uncertain application of the Sherman act to SSOs. The approach in *Rambus* severely reduces the US antitrust laws effectiveness to protect SSOs. Following the reasoning presented by the D.C. Circuit, deceptive non-disclosure of patents is beyond the scope of the Sherman act despite that such conduct would infringe SSO requirements. In that regard the Sherman act does not take into account the market structure that exists within an SSO, while under an EU approach it would, at least according to the Commission. One could argue that Section 2 of the Sherman act is not drafted to address this type of behavior, but the ruling of *Qualcomm* suggests otherwise. Thus the question is whether one of the courts failed in their interpretation of the scope or if both readings could be correct. It is evident that the scope of Section 2 is narrower than article 102 TFEU. In the *Rambus* case the court also had more agency findings of facts and could conclude its ruling on a completed evidentiary record. The most accurate jurisprudence is thus still undecided and probably will be until the US Supreme Court rules on the subject, creating an unnecessary legal uncertainty for both undertakings and SSOs.

8.2 Standard settings under EU competition law

Let us first consider all the criteria necessary for being held to occupy a dominant position on a market in a standard setting environment. According to the earliest case law the company in a SSO must first be in a position of economic strength. That position must then confer enough power so that the company may act independent on any competitor, customer or consumer. Both Rambus and Qualcomm are liable under article 102 TFEU, however of important note is that they both occupied this position before their alleged abusive actions took place. Thus the liability question for an EU court would not be difficult. Considering a different scenario where the company first became dominant as a result of their behavior in a standard setting process the outcome might be different. Then depending on the action the abuse might relate to a period of time when the undertaking was not dominant. This is the case with patent hold-ups, the conduct is performed before a lock-in, thus if the company undertaking the action is not dominant it might still be competition on the merits and avoid scrutiny under article 102 TFEU. If the undertaking would be held responsible then the application of article 102 TFEU would be retroactive, a very controversial approach. This threat to liability is most evident when NPEs acquire essential patents. They are often not as big as the SSO actors and have no obligation towards the SSO since they are not members of it and finding liability under article 102 TFEU might prove difficult. It will be recalled that the mere possession and use of a patent is not enough to satisfy the dominance requirement. What is possible is that companies like Rambus and Qualcomm can be held to be dominant because of their position on the market coupled with their possession of patents. Thus there is no need for undertakings active in a SSO to have a high market share to fulfill the dominance requirement. As in *AstraZeneca* a company that has the advantage of technological superiority might be held to be dominant on the

basis of their advancements in a certain field. Such superiority will as a minimum add to the dominance examination.

Concerning failure to satisfy FRAND commitments, such conduct is done after a lock-in, when the company has already gained significant market power because of its patent interests. Such conduct should therefore not create any liability problems under article 102 TFEU. Accordingly, assessing whether article 102 TFEU is applicable might be difficult if the company is not dominant prior to joining the SSO or prior to the lock-in on a technology.

The EU courts also have to consider the relevant market, which consists of the product and geographical markets. Given the EU judiciaries' disposition to find relevant markets this requirement should be satisfied with no trouble. The aim of an SSO is to develop a standard for a certain type of product, thus the very nature of SSOs defines the product market. Eliminating competing technologies and narrowing down interchangeable products with similar price and intended use to one standard provides a very detailed product market. Neither should the definition of the geographic market pose problems for article 102 TFEU liability. One could argue that the conditions for competition in a given area changes after the lock-in of a technology; the owners of essential patents gain significant market power, and consequently it's more difficult to narrow down the geographic market. It will be recalled that the market needs to be a specific area where the undertakings involved trade in the same service or product under homogenous conditions of competition and is distinguishable from other markets. However, once again the nature of SSOs defines the borders of the geographic market, through the purpose of the SSO the borders and limits of the market is provided. Considering standards used on world-spanning markets, these are still used in the EU with competition conditions exclusive to the EU market and should thus be distinguishable from the standards' market outside of EU. Accordingly finding liability under article 102 TFEU to conduct should not prove too difficult, the biggest threat is the behavior of NPEs.

It will be recalled that being dominant is not an abuse in and of itself and the conduct discussed in this thesis must therefore be considered abusive. Thus patent ambush, failure to commit to FRAND terms and NPEs must, inter alia, be considered to affect the structural integrity of the market. The approach under EU law offers wider possibilities to extend the scope of article 102 TFEU than Section 2 of the Sherman act, i.e. under EU law both exclusionary and exploitative actions are illegal. The exploitative approach under US antitrust law limits the application possibilities. Patent ambush and failure to commit to FRAND terms both affect the structural integrity of a market. Both actions considerably limit the degree of competition on conditions that are not present on a competitive market or in a competitive SSO. Companies liable under article 102 TFEU are also forbidden to perform conduct that might be allowed if they were not dominant. Had Rambus and Qualcomm not been dominant their behavior might not have garnered the effects and opposition that were present. Once again the danger with patent hold-up becomes evident, if the hold-up is performed while not being dominant finding an abuse might be difficult. Since standards are chosen on an international level they *prima facie* affect trade between member states. Should standardization occur on a national level it is enough that it is capable of affecting trade between member states, the effect does not have to be appreciable. Not all established criteria for abusive actions are attestable. Determining the effects on new or potential competition might prove difficult since the process of standard settings eliminates other alternatives on its own. Depending on the position of the firm on the market they might not even be able to act even within the frame of competition on the merits. If the company at the start of a standard setting process can be held to be super dominant they will have a special responsibility not to distort competition. Considering the facts from Rambus and Qualcomm both could be argued to fall within this category. Thus their actions will be judged to be abusive if they contribute to strengthen their dominant position, since that would weaken competition on the market as a whole. Thus even actions within the scope of competition on the merits are prohibited. Both patent ambush and failure to commit to FRAND terms are within this scope.

Even if the actions were not deceptive and could be considered to be within the merits they still strengthen both Rambus and Qualcomms positions significantly. A safeguard against NPEs that are dominant can be found in the *Tetra Pak I* case. Accordingly the acquisition of a patent might be an abusive conduct if it serves to strengthen the NPEs already strong position and it disrupts the competitive process. If one can establish that an SSO participant controls supply in a downstream market by virtue of the upstream market one is also able to find abusive conduct. The important factor is that the company concurrently is active with customers in both markets. This is not applicable to patent ambushes, but through the refusal to use FRAND terms a company is able to freely control both royalty fees on the standardized products and prices on a secondary market, which was the case in Qualcomm. The refusal to commit to FRAND terms bring to light another type of abuse detailed in the jurisprudence of the EU judiciary, the refusal to supply and license and the essential facility doctrine. Inter alia if a company refuse to license and there is no substitute for the product technology, and there is a consumer demand there is an abusive action by the company which can only be acceptable if the undertaking can show objective justifications. Because of the nature of SSOs no substitute exists for the essential patents for the standard and one of the reasons to standardize in the beginning is that there exists a consumer demand. Neither is the refusal to license on FRAND terms an objective justification. While SSOs rarely define FRAND and there is no case law to provide an interpretation, guidance ought to be sought in case law on excessive pricing. It will be recalled that the CJEU has regarded excessive pricing as abusive conduct since *General Motors*. Following the jurisprudence assessing prices for IPR is difficult; the reasonable rate of return for the patent owner needs to be considered. A definition might however be found in the combination of the purpose of SSOs and FRAND terms together with what prices would be on a competitive market. While SSOs don't provide detailed descriptions on FRAND it is obvious that the prices should reflect those received under normal competition, i.e. before a company had their technology

standardized. Prices that would range above this should therefore fall within the scope of abusive conduct.

The leeway to invoke objective justifications should be limited in a standard setting environment. Neither patent ambushes nor failure to commit to FRAND terms are actions that are based solely on the commercial interests, both serve to alter the competitive process with varying results. This is dependent on the position of the company but despite this it should not be possible for a company to claim such an exception. Even less is the actions taken by the NPEs able to rely on this defense because of their sole interest to gain competitive advantages in order to claim higher royalty fees. Furthermore objective justifications rely on the principle of proportionality to determine whether the measures taken escape scrutiny under article 102 TFEU. Proportionality in a standard setting environment should be weighed against the goal and purpose of the SSO. Since the specific conduct discussed in this thesis contradicts the very essence and benefits of standard settings neither of them should be proportionate, thus nullifying the escape offered by objective justifications.

8.3 Conclusion

The potential EU approach available to standard setting behavior is very interesting since it offers, according to me, a much more extensive protection than the one offered by US antitrust law. The first strength of the EU approach is the freedom given to the Commission, and its influence compared to the FTC. The Commission is unyielding in its protection and its aspiration to unify the EU market, as is the EU judiciary. The fundamentals of respective legislation create differences in rulings while addressing the same legal issue. Constructing short statements of objection, the Commission managed to prove they had a viable approach to apply article 102 TFEU to conduct inherent in SSOs. With the flexibility and ambiguous language of article 102 TFEU the EU judiciary holds on to its established principles which preserves the objective to keep competitive market structures, thus extending the scope of article 102 TFEU to encompass new challenges and threats to the internal market. It is evident

that deceptively committing to FRAND terms is the behavior most likely to fall within the scope of article 102 TFEU. It is established that the lock-in of a technology considerably raises a firm's market share and power, thus making it at a minimum dominant. If the company was dominant prior to the lock-in one could also argue for super-dominance. The subsequent withdrawal of the commitment therefore can be held to be abusive on almost all accounts according to EU competition law. Patent hold-ups present a more difficult challenge. Since it is possible that the conduct is performed before lock-in, it is possible that the undertaking was not dominant and would escape scrutiny, even more so NPEs which are not members of SSOs and thus has never committed to a promise. If one could apply the *AstraZeneca* case then dominance could be established on the basis of a much more superior technology and both an original owner and NPE would be caught. Nevertheless this might not be the case and the undertaking would avoid scrutiny under current case law. This is however not likely to happen if a case were brought before an EU court. Considering the aim of EU competition law and how the EU judiciary conceptualizes competition law issues, it is highly likely that dominance would be found.

From an economic perception it is only logical to address the specific conduct with hostilities and protect both the market and concept of SSOs. If this kind of behavior would be legal most of the financial and social benefits of SSOs would disappear. It is of course important to protect the patents belonging to SSO members and not to reduce the incentive to innovate. The benefits a company receive from having their technology included in a standard far compensate for the reduced royalty fees they can charge. These include, inter alia, no competing technology and an assurance that their technology will be commercialized. Thus I believe that the usual balance that needs to be reached when competition law and IPR face off against each other is not present in a standard setting environment. The protection of fair competition within SSOs is far more important. Furthermore the unharmonized legislation governing patents presents more complex and expensive patent litigations than in the US. While this often is perceived as a negative feature of EU law it serves as a natural protection against patent

hold-ups from NPEs. It is considerably more expensive to acquire patents in the entire EU than it is in the US, thus reducing the financial benefits for NPEs.

Although the EU still lacks the necessary legal development to predict the application of competition rules to behavior in SSOs it is nevertheless well prepared for what the future might bring. While creating a legal obscurity for undertakings, the Commissions' objections coupled with the subsequent remedies provide a strong indication on the position and adaptability of article 102 TFEU.

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