

Ashish Bharadwaj · Vishwas H. Devaiah  
Indranath Gupta *Editors*

# Multi-dimensional Approaches Towards New Technology

Insights on Innovation, Patents and  
Competition



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and Competition



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*We dedicate this book to all risk-taking innovators in science and technology, who made us believe that the best way to deconstruct the future is to invent it. Their capability is to not see change as a threat, but as an opportunity.*

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# Contents

## Part I Law and Policy Dilemmas in Innovation Intensive Industries

1	Intellectual Property and Competition Law: Understanding the Interplay . . . . .	3
	Hanna Stakheyeva	
2	The Interaction Between Intellectual Property Law and Competition Law in the EU: Necessity of Convergent Interpretation with the Principles Established by the Relevant Case Law . . . . .	21
	Nikolaos E. Zevgolis	
3	The Relevance of Standardization in a Future Competitive India and the Role of Policy Makers, Antitrust Authorities and Courts to Promote it . . . . .	43
	Sheetal Chopra, Matteo Sabattini and Dina Kallay	
4	The Role of the European Commission in the Development of the ETSI IPR Policy and the Nature of FRAND in Standardization . . . . .	73
	Eric L. Stasik	
5	All Good Things Mustn't Come to an End: Reigniting the Debate on Patent Policy and Standard Setting . . . . .	85
	Ashish Bharadwaj, Manveen Singh and Srajan Jain	

## Part II Evolving Jurisprudence in Standard Essential Patents

6	Interpreting the ‘FRAND’ in FRAND Licensing: Licensing and Competition Law Ramifications of the 2017 <i>Unwired Planet v Huawei</i> UK High Court Judgements . . . . .	119
	Noah D. Mesel	

<b>7</b>	<b>Evolving <i>Huawei</i> Framework: SEPs and Grant of Injunctions . . . . .</b>	137
	Indranath Gupta, Vishwas H. Devaiah, Dipesh A. Jain and Vishal Shrivastava	
<b>8</b>	<b>The Development and Theoretical Controversy of SEP Licensing Practices in China . . . . .</b>	149
	Yang Cao	
<b>9</b>	<b>Regulating Abuse of SEPs in Mobile Communications Market: Reviewing 1st and 2nd Qualcomm Cases in Korea . . . . .</b>	163
	Dae-Sik Hong	
<b>10</b>	<b>Regulating Standard Essential Patents in Implementer-Oriented Countries: Insights from India and Japan . . . . .</b>	183
	Ashish Bharadwaj and Tohru Yoshioka-Kobayashi	

### **Part III Perspectives from Indian Competition and Patent Law**

<b>11</b>	<b>Predatory Pricing in Platform Competition: Economic Theory and Indian Cases . . . . .</b>	211
	Aditya Bhattacharjea	
<b>12</b>	<b>Competition Law and Standard Essential Patent (SEP) in India: A Few Critical Issues to Ponder . . . . .</b>	231
	Geeta Gouri	
<b>13</b>	<b>Interface Between Antitrust Law and Intellectual Property in the Payment Systems Market in India . . . . .</b>	243
	Yogesh Dubey and Konark Bhandari	
<b>14</b>	<b>Towards a Transaction Cost Approach to the Essential Facilities Doctrine . . . . .</b>	273
	Yugank Goyal, Padmanabha Ramanujam and Anmol Patel	
<b>15</b>	<b>Local Working of Patents: The Perspective of Developing Countries . . . . .</b>	315
	Althaf Marsoof	

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**Nikolaos E. Zevgolis** lawyer and legal expert in the Directorate of Legal Services of the Hellenic Competition Commission (since 2004) was appointed as Commissioner-Rapporteur, Member of the Board of the same Authority in December 2015 by the Minister of Economy, Development and Tourism, Prof. G. Stathakis. In the period between November 2012 and December 2015, he was working for the Hellenic Ministry of Finance: from June 2014 to December 2015 as rapporteur in Central State Aid Unit and, before this position (i.e. November 2012–May 2014), as legal advisor to the Alternate Minister of Finance, Prof. C. Staikouras. For the academic seasons 2015–2016, 2016–2017, he had tutorship cooperation with the Open University of Cyprus (Administrative and Commercial Law). For the academic season 2017–2018, he has tutorship cooperation with the Hellenic Open University (Basic Principles of Law and Administration). He has also given lectures at the Athens University of Economics and Business mainly on European Competition Law issues, European Law and Regulatory Policy. He is co-author (with Panagiotis Fotis) of the monograph with the title “*The Competitive Effects of Minority Shareholdings. Legal and Economic Issues*”, Hart Studies in Competition Law, Bloomsbury Publishing Ltd, 2016. He has also written four monographs in Greek. In addition, he has published articles and case notes (alone or with other authors) in several Greek legal journals.

# Introduction

The growing realization that technological innovation could lead to prosperity persuaded many governments and industries to make unprecedented efforts to promote innovation and intellectual property rights (IPRs). In the high-technology sectors, the patent system has been a vital mechanism to drive innovation. The view that IPRs and competition law routinely appear to be at odds is predicated on the dichotomy of the underlying pro-competitive and anticompetitive effects. Nonetheless, both Intellectual Property (IP) law and competition law share the broad objectives of promoting consumer welfare and an efficient allocation of resources.

Technologies protected by patent law are extremely valuable when they become part of a standard. This accepted standard or norm for instance 3G, 4G or 5G is an outcome of number of technologies working together in a cohesive and efficient manner. While patents continue to protect these technologies in a standard, they become essential for the standard to work. With patented technologies becoming part of a standard, further obligations are bestowed upon holders who invest towards those technologies. One of the foremost obligations is to allow other interested stakeholders to use standard essential patents (SEPs), which form a part of a standard on fair, reasonable, and non-discriminatory (FRAND) terms and conditions. With FRAND obligation in place, non-compliance on the part of technology holders would bring them within the periphery of the scrutiny of competition authorities.

SEPs are fairly common in the telecommunication sector. Standards declared by standard setting organizations (SSOs) allow innovators to negotiate licenses with implementers on FRAND terms and conditions. In most instances, innovators and implementers successfully negotiate licensing of SEPs. However, there have been instances wherein disagreements on royalty base and royalty rates, terms of licensing, bundling of patents in licenses, pooling of licenses have emerged. This has resulted in a surge of litigation in various jurisdictions and also drawn the attention of competition/antitrust regulators. Further, a lingering lack of consensus among scholars, industry experts and regulators regarding solutions and techniques that are apposite in these matters across jurisdictions has added to the confusion.

As SSOs play a major role in developing and declaring standards, it is necessary to examine the role essayed by them in evolving policies that seek to serve the public interest in a variety of ways by facilitating interoperability among complementary products. It is necessary to examine the role of procedural changes by SSOs and the level of transparency maintained by SSOs in changing IPR policies. Some contributions in this book focus on the changing dynamics of collaboration among innovators within the context of anticompetitive effects on standard development. How substantive competition rules are enforced plays a crucial role in achieving their goals. There has been a push for increased transparency and due process from both industry participants as well as competition regulators themselves. But, in matters of FRAND encumbered SEPs, should competition regulators be like lifeguards that act when there is a possibility of an adverse outcome (to competition), or like tollbooth attendants that monitor (competitors) at every stage? This question becomes even more important in the light of emerging trends in Asian jurisdictions *vis-à-vis* best practices in due process and antitrust enforcement established in some other jurisdictions.

For regulators and courts across several jurisdictions, resolving issues at the interface of IP and competition law especially in markets driven by high-technology industries have become a daunting task. This edited volume brings together chapters from scholars and practitioners of IP and competition law that discuss how regulatory agencies and courts deal with issues at the interface of IP, competition and standardization of high-technology products in India, Germany, UK, China, South Korea and the European Union (EU).

This edited volume highlights some of the contentious issues that have been discussed in the last two decades. These broadly include the rights of the SEP holders with respect to the use of their technology by a licensee and role of antitrust authorities and courts in matters relating to licensing of SEPs. The courts amongst other issues have thus far decided cases in relation to infringement of patents, granting of injunction in FRAND encumbered SEPs, FRAND obligation of the technology holder, comparable licenses in setting royalty rates and the conduct of parties leading up to negotiation of licensing of SEPs. The conduct of parties (i.e. a willing or an unwilling licensee) has become a decisive factor before granting injunctions to SEP holders in FRAND encumbered SEPs.

Part I of the book delves into the law and policy dimensions of the innovation in the high-technology industry. It discusses the issues related to the interface between IPRs, competition law and the role of SSOs in developing standards. **Hanna Stakheyeva** in the chapter titled *Intellectual Property and Competition Law: Understanding the Interplay* focuses on the interface between IPR and competition law. Exercising rights by the IPR holder in certain circumstances may attract the provisions of competition law especially when it has an adverse effect on consumer welfare or amounts to abuse of dominant position. IPR holders may also seek to protect themselves against unfair competition by exercising their rights and statutory remedies. She provides a general overview of the interface between IPR and competition law with specific reference to sectors like the pharmaceuticals, information technology, luxury brands by providing an analysis of the potentially

problematic agreements and practices from the point of view of the competition rules. **Nikolaos E. Zevgolis** in his chapter on *The Interaction Between Intellectual Property Law and Competition Law in the EU: Necessity of Convergent Interpretation with the Principles Established by the Relevant Case Law* takes the discussion forward on the interface between IPR and competition law by examining how the EU Competition Commission (EC) through procedural guidance and economic, effect-based substantive rules established principles to deal with anti-competitive practices of IPR holders. He looks at the question of market power and concludes that it can only be assessed on a case-by-case basis. He examines this concept by explaining the ‘careful’ approach of the EC in the *Motorola* and *Samsung* cases. **Sheetal Chopra, Matteo Sabattini and Dina Kallay** in their chapter on *The Relevance of Standardization in a Future Competitive India and the Role of Policy Makers, Antitrust Authorities and Courts to Promote it* explore the motivations and strategies of certain stakeholders to devalue SEPs. This chapter aims to address the challenges that the information and communications technology (ICT) industry is currently facing considering past scepticisms from antitrust agencies and courts. Finally, the chapter recommends policy-makers to avoid tilting the fragile balance between technology providers and technology implementers achieved through FRAND licensing. An imbalance of interests could, otherwise, potentially affect the innovation cycle, reduce investments in R&D, and favour proprietary solutions as opposed to interoperable, standardized options. **Eric L. Stasik** in his chapter on *The role of the European Commission in the Development of the ETSI IPR Policy and the nature of FRAND in Standardization* discusses the crucial role of SSOs in formulating IPR policies that aims to balance the interest of patent holder and implementers. Stasik traces the role of EC in evolving ETSI’s IPR policy and how this has influenced the development of standards and FRAND rates. **Ashish Bharadwaj, Manveen Singh and Srajan Jain** in their chapter on *All Good Things Mustn’t Come to an End: Reigniting the Debate on Patent Policy and Standard Setting* examine the 2015 IPR policy of the Institute of Electrical and Electronics Engineers (IEEE), an SSO that has significantly influenced the development of standards in mobile technology.

Part II provides an understanding of the evolving jurisprudence in SEPs involving the high-technology industry. It specifically attempts to highlight the conflict between the SEP holders and implementers. It provides an understanding of the differences in approach to negotiating a license between a SEP holder and implementer that has led to litigation between the parties and also drawn the intervention of competition authorities in some jurisdictions. **Noah D. Mesel** in his chapter on *Interpreting the ‘FRAND’ in FRAND Licensing: Licensing and Competition Law Ramifications of the 2017 Unwired Planet v Huawei UK High Court Judgements* discusses the implications of the UK High Court judgements in *Unwired Planet v Huawei*. Building on the Court of Justice of the European Union’s (CJEU) decision in *Huawei v ZTE*, the UK High Court has stated that a FRAND license is by definition a global license; how, specifically, should the

royalty rates be calculated; whether a FRAND royalty rate is a finite number or a range of possible rates; clarification of the parties' obligations with respect to the negotiation process; and what the contents of a FRAND license agreement should be. In addition, the UK High Court has added further clarification as to how FRAND law should be analysed in the context of prevailing competition law.

**Indranath Gupta, Vishwas H. Devaiah, Dipesh A. Jain and Vishal Shrivastava** in their chapter on *Evolving Huawei Framework: SEPs and Grant of Injunctions* reflect on the framework developed in the *Huawei* judgement and show how this framework has evolved in the post *Huawei* cases in Germany. The post *Huawei* cases have tried to adhere to the overall framework provided under *Huawei*, although there are number of inconsistencies as to specific obligations. From the perceived inconsistencies, this chapter concludes on a note that the overall conduct of the parties would play a major role before granting injunctive relief to SEP holders. Further, **Yang Cao** in his chapter on *The Development and theoretical controversy of SEP licensing practices in China* examines how the Chinese Supreme Court thinks that an SEP holder can only claim the royalty rate that is apparently below the normal licensing rate. He argues that the Guangdong court in *IDC v Huawei* case seems to have adopted a so-called possible lowest royalty rate policy. He examines how different royalty rate policies have been adopted by different courts in China and explores possible factors that can determine the rate. **Dae-Sik Hong** in his chapter on *Regulating abuse of SEPs in Mobile Communication Market: Reviewing 1st and 2nd Qualcomm Cases in Korea* analyses how the Korea Fair Trade Commission (KFTC) dealt with two sets of cases involving Qualcomm. Hong analyses some of the competition law issues raised in the two cases. He examines the issue of defining relevant markets, the criteria for determining whether there is a violation or evasion of FRAND commitment, the competition law assessment of FRAND commitment infringements, and the theories of competitive harm and its proving. **Ashish Bharadwaj and Tohru Yoshioka-Kobayashi** in their chapter on *Regulating Standard Essential Patents in Implementer-Oriented Countries: Insights from India and Japan* discuss about the regulations governing SEPs in the setting of implementer-oriented countries. They argue that recent public policy struggles in India and Japan illustrate the difficulty of their fair and effective regulation. They further argue that experiences in India and Japan imply that implementer-oriented countries should develop capacities of court judges and national competition agencies to provide fair and reasonable decisions and try to resolve information asymmetry.

Part III provides perspectives on the developments in the high-technology industry in India. It examines the role of the Indian competition and patent law in shaping the high-technology industry in India. **Aditya Bhattacharjea** in his chapter on *Predatory Pricing in Platform Competition Economic Theory and Indian Cases* examines the issue of predatory pricing, or pricing below costs in order to drive out one or more rival firms. This chapter provides a non-technical introduction to the economics of predatory pricing, showing why scholars and competition agencies in the US and EU became increasingly sceptical of the feasibility of such a business strategy. He then discusses how the Competition Commission of India (CCI) has

dealt with some of these issues, in recent cases which have involved allegations of predatory pricing against the app-based taxi aggregators Ola and Uber, whose rivalry exemplifies platform competition. **Geeta Gouri**, a former Member of the CCI, in her chapter on *Competition Law and Standard Essential Patent in India: A Few Critical Issues to Ponder* explores the reason behind the Delhi High Court decision to permit the CCI to resume its investigation on the allegation of abuse of dominance by Ericsson while negotiating SEP licenses with Indian manufacturers of mobile phones. This chapter provides a layered nuanced approach using economic analysis. **Yogesh Dubey and Konark Bhandari** in their chapter on *Interface Between Antitrust Law and Intellectual Property in the Payment System Market in India* examine the digital payments' sector, especially after demonetization. This chapter seeks to examine whether mobile wallet companies can successfully compete with banks when they are denied access to critical interoperability infrastructure that is currently under the proprietorship of banks. This chapter will delve into whether mobile wallet companies can resort to the invocation of the Essential Facilities Doctrine (EFD) in trying to secure access to such interoperability infrastructure and how this interacts with the IPRs of the banks. **Yugank Goyal, Padmanabha Ramanujam and Anmol Patel** in their chapter on *Towards a Transaction Cost Approach to the Essential Facilities Doctrine* examine the EFD through transaction cost lens. The chapter locates the doctrine's presence in Indian case laws, identify the problems therein (particularly in cases involving IP) and propose that the doctrine's construction in India should be guided by EU's model. Lastly, **Althaf Marsoof** in his chapter on *Local Working of Patents: The Perspective of Developing Countries* explores the local working requirement in patent law. He examines the tension between two international instruments, the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and the Paris Convention and suggests how TRIPS flexibilities may be used in favour of imposing a local working requirement under domestic patent law, while also considering the approaches adopted in relation to local working requirements in India and Sri Lanka.

In conclusion, we are immensely grateful to all the contributors. We hope that the observations made in this volume contribute to the improved understanding of extremely complex and divergent issues. This edited volume presents a nuanced deliberation on relevant global developments and perspectives relating to standardization, patent and competition issues. Therefore, we hope that our contribution is useful for all our readers.

**Part I**

**Law and Policy Dilemmas in Innovation  
Intensive Industries**

# Chapter 1

## Intellectual Property and Competition Law: Understanding the Interplay



Hanna Stakheyeva

### 1 Introduction

The most common concern from a competition law perspective is the possible violation of competition law due to the existence of patents/trademarks/copyright, which grant exclusive power that may potentially be abused by the Intellectual Property right (IPR) holders to the detriment of consumer welfare, as well as innovation. Hence, competition law is applicable to the area of intellectual property (IP) and may be invoked by the consumers, any interested/affected third party to ensure that the IP right holders are not abusing their (dominant, if not monopolistic) position. At the same time, IP rights holders may rely on competition law to protect themselves from unfair competition and encourage more competition and innovation in the market.

This chapter provides a general overview of the interplay between competition law and IPRs in such sectors as pharmaceuticals, information technology, luxury brands. It analyses potentially problematic agreements and practices from the point of view of the competition rules and provides some highlights of the latest investigations launched/conducted primarily at the EU level. It is concluded that recent enforcement of competition law in the sphere of IP (patents (standard essential patents (SEPs)), trademarks and copyright) in various industries shall significantly affect the legal landscape for the IP right owners; hence they should now, more routinely, consider competition law risks and implications in every step of their economic activity.

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## 2 IP and Competition Law: Main Concerns and Misuses

Competition law issues may arise in any area of IP: patents, trademarks, and/or copyright. In most cases it is the IP right holders with a strong market power (if not dominance) that have to be particularly cautious about competition law implications of their practices. As known '[...] the fact that an undertaking holds a dominant position is not in itself contrary to the competition rules. However, an undertaking enjoying a dominant position is under a special responsibility not to engage in conduct that may distort competition.<sup>1</sup> Companies that have IP rights are perceived as dominant, and their activities fall under a special attention of the Competition Authorities more often nowadays. Following parts provide analysis of the main competition law issues in the three IP-related areas: patents, trademarks and copyright.

### 2.1 Patents and Competition Law

Patent holders are most likely to abuse market power via various practices, such as refusal to license, excessive pricing, unfair or discriminatory licensing, anticompetitive use of SEPs; abuse of dominance and delaying market entry of competitors via misuse of patent/regulatory process (supplementary protection certificates (SPCs)), excessive pricing, as well as concluding anticompetitive agreements (patent settlement agreements (PSAs)).

#### 2.1.1 Abuse of Market Power via Refusal to License and Seeking Injunctive Relief by SEPs: ‘Smartphone Patent Wars’

The IP right holders may seek to lock competitors’ products from entering the market based on the SEP and thereby breach competition law. The SEP protects technology that is essential to a standard<sup>2</sup> (in other words, it is impossible to manufacture standard-compliant products without using such technologies covered by SEP). No alternative solution is possible, e.g. ‘slide to unlock’ technology is non-SEP since different technologies can be developed for unlocking a smartphone

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<sup>1</sup>Case COMP/C-3/37.792 *Microsoft* (2004) OJ L32/23, para 52.

<sup>2</sup>A standard sets out requirements for a specific item, material, system, service and ensures that products ‘communicate’/match with each other (e.g. A4 size paper, mobile phone charger, 4G, 3G telecommunication standards). Standards are set by the standard setting organizations (SSO), e.g. ETSI, etc.

screen. This would not be possible with SEPs.<sup>3</sup> The SEP is not only relevant for the telecommunications, but also for audio/video, security and biometrics, transport, logistics, aerospace, energy generation, power electronics, industrial equipment, etc.

The SEPs confer significant market power on their holders, and potential to abuse it by adopting standards to exclude competitors or extract excessive royalty fees, cross-license fees to which the licensee would not otherwise agree to. The SEP protects the invention which is necessary and standard for the use of a certain technology. As operating in the downstream market is dependent on having access to the product in the upstream market, the SEP becomes an ‘essential facility’.<sup>4</sup> The competition authorities worldwide have been focusing on this, amid concerns that ‘SEP owners may have been exploiting market power, and holding up innovation, through unreasonable or discriminatory licensing demands.’<sup>5</sup> To alleviate these competition concerns, Standard Setting Organizations (SSOs) today require the SEP owners to commit to licensing their SEPs on fair, reasonable, and non-discriminatory terms (FRAND), which aims at bringing equilibrium in the compulsory licensing that the SEP implies. FRAND ensures accessibility of the technology incorporated in a standard to the manufacturers of standard-compliant product, and reward SEPs holders financially through licensing revenue.<sup>6</sup>

There have been several cases in relation to the SEPs, FRAND and interim injunctions as part of the patent infringement proceedings. This part will focus on *Samsung* and *Motorola* cases to demonstrate these issues and their interplay with the competition law more precisely. Both cases relate to Samsung and Motorola’s negotiations with Apple in Germany for the licensing of their respective mobile telecom SEPs. Those negotiations subsequently broke down, causing Samsung and

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<sup>3</sup>Case AT.39939 *Samsung Electronics*-Enforcement of UMTS SEPs (2014) OJ C 350/8, para 7 states that:

Standards ensure compatibility and interoperability of telecom networks and mobile devices. Mobile devices typically implement a large number of telecommunication standards (such as the so-called third generation or ‘3G’ (UMTS) standard). These standards make reference to thousands of technologies, many of which are protected by patents. Patents that are essential to a standard are those that cover technology to which a standard makes reference and that implementers of the standard cannot avoid using in standard-compliant products. These patents are known as SEPs. SEPs are different from patents that are not essential to a standard (non-SEPs).

<sup>4</sup>Essential facilities doctrine: To prevent the competitive featured of the downstream market from being threatened by the concentrated structure of the upstream market and to develop competition in this former market, the obligation for undertakings in a dominant position to compulsorily enter into agreement with their competitors can be established.

<sup>5</sup>IP and Antitrust: Implications of Recent Cases and Likely Policy Developments in 2017’ (*Freshfields*, 2018) <<http://antitrust.freshfields.com/ip-and-antitrust>> accessed 8 January 2018.

<sup>6</sup>*Samsung Electronics* (n 3), states that:

(9) ETSI is one of the three European Standardisation Organisations. ETSI is officially responsible for producing standards and specifications supporting EU and EFTA policies and enabling an internal market in telecommunications. (10) The rules of ETSI impose two main obligations on companies participating in the standard-setting process: (i) to inform ETSI of their essential intellectual property rights (IP) in a timely fashion before the adoption of the standard, and (ii) to give a commitment to make their IP available on FRAND terms and conditions.

Motorola to bring patent infringement proceedings against Apple in the German Courts. In the context of those patent infringement proceedings they applied for interim injunctions for their respective SEPs. This encouraged the European Commission (EC) to open formal investigations against Samsung and Motorola to determine whether their conduct violated competition law i.e. whether they abused their dominant position.

In the *Motorola* case,<sup>7</sup> the EC found that, although seeking interim injunction before courts is generally a legitimate remedy for holders of SEPs in case of patent infringements, Motorola violated the European Union (EU) competition law (Article 102 of the Treaty on Functioning of the EU (TFEU) which prohibits abuse of dominance) by seeking injunction in court against a willing licensee, Apple, on the basis of Motorola's SEP. Motorola declared the patent on which it sought injunction as essential to the implementation of the 2G European Telecommunications Standards Institute (ETSI) standard, and it committed to license the SEP to third parties on FRAND terms. Additionally, Apple agreed with Motorola that in case of dispute the German courts would set the applicable rate and Apple would pay royalties accordingly (all of which showed willingness to enter into the license agreement and to pay adequate compensation to the SEP holder). The EC also found it anticompetitive that Motorola insisted Apple to give up its right to challenge the validity or infringement of Motorola's SEP. Eventually, Motorola was ordered to eliminate the negative effects resulting from the injunction.<sup>8</sup> In its infringement decision, the EC exercised its discretion (and exceptionally) did not impose a fine because of the divergent decisions of the EU Member States and the absence of the EU case law.

In the *Samsung* case,<sup>9</sup> the EC decided not to proceed to an infringement action and instead accepted legally binding commitments<sup>10</sup> offered by Samsung not to seek injunctions in relation to any of its present and future SEPs (e.g. Universal Mobile Telecommunications System (UMTS)) for mobile devices for a period of five years against any potential licensee that agrees to accept a particular licensing framework for the determination of FRAND terms and conditions during the standard-setting process in the ETSI. The detailed licensing framework provided for: (i) a negotiation period of 12 months; and (ii) if no agreement was reached, a third party FRAND determination by a court or arbitrator.<sup>11</sup>

Therefore, as seen from the two cases, the EC's position is that where a patent holder has given a commitment to license on FRAND terms, and the potential

<sup>7</sup>Case AT.39985 *Motorola*-Enforcement of GPRSs Standard Essential Patents (2014) OJ 344.

<sup>8</sup>'EU—Apple v Motorola/Press Release Anticompetitive Use of SEP' (*EPlawpatentblog*, 2014) <<http://www.eplawpatentblog.com/eplaw/2014/07/eu-apple-v-motorola-press-release-re-anti-competitive-use-of-sep.html>> accessed 8 January 2018.

<sup>9</sup>*Samsung Electronics* (n 3).

<sup>10</sup>Commitments offered to the EC, *ibid*.

<sup>11</sup>'The EU Court of Justice Judgement in *Huawei v ZTE*—important confirmation of practical steps to be taken by Standard Essential Patent Holders Before Seeking Injunctions' (*Norton Rose* 2015) <<http://www.nortonrosefulbright.com/knowledge/publications/131306/the-eu-court-of-justice-judgement-in-huawei-v-zte-important-confirmation-of-practical-steps-to-be-taken-by-st#autofootnote8>> accessed 15 October 2017.

licensee is ‘willing’ to negotiate a licence on that basis, the seeking of an injunction by the SEP holder could constitute an abuse of a dominant position under Article 102 TFEU. This is on the basis that, in the EC’s view, the SEP holder can use the threat of an injunction to distort licensing negotiations and impose unjustified licensing terms on licensees.<sup>12</sup>

This position has also been confirmed by the Court of Justice of the EU (CJEU) in 2015 in its landmark judgement in *Huawei Technologies Co. v ZTE*.<sup>13</sup> The CJEU stated that:

Article 102 TFEU must be interpreted as meaning that the proprietor of a patent essential to a standard established by a standardisation body, which has given an irrevocable undertaking to that body to grant a licence to third parties on fair, reasonable, and non-discriminatory (‘FRAND’) terms, does not abuse its dominant position, within the meaning of that article, by bringing an action for infringement seeking an injunction prohibiting the infringement of its patent or seeking the recall of products for the manufacture of which that patent has been used, as long as:

– prior to bringing that action, the proprietor has, first, alerted the alleged infringer of the infringement complained about by designating that patent and specifying the way in which it has been infringed, and, secondly, after the alleged infringer has expressed its willingness to conclude a licensing agreement on FRAND terms, presented to that infringer a specific,

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<sup>12</sup>ibid.

<sup>13</sup>Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp* EU:C:2015:477.

According to the facts of the case, Huawei Technologies, a multinational company active in the telecommunications sector, is the proprietor of, inter alia, the European patent registered under the reference EP 2 090 050 B 1, bearing the title ‘Method and apparatus of establishing a synchronisation signal in a communication system’, granted by the Federal Republic of Germany, a Contracting State of the EPC (‘patent EP 2 090 050 B 1’). That patent was notified to ETSI on 4 March 2009 by Huawei Technologies as a patent essential to the ‘Long Term Evolution’ standard. At the same time, Huawei Technologies undertook to grant licences to third parties on FRAND terms.

Between November 2010 and the end of March 2011, Huawei Technologies and ZTE Corp., a company belonging to a multinational group active in the telecommunications sector and which markets, in Germany, products equipped with software linked to that standard, engaged in discussions concerning, inter alia, the infringement of patent EP 2 090 050 B 1 and the possibility of concluding a licence on FRAND terms in relation to those products. Huawei Technologies indicated the amount which it considered to be a reasonable royalty. For its part, ZTE Corp. sought a cross-licensing agreement. However, no offer relating to a licensing agreement was finalised.

Nonetheless, ZTE marketed products that operate on the basis of the ‘Long Term Evolution’ standard, thus using patent EP 2 090 050 B 1, without paying a royalty to Huawei Technologies or exhaustively rendering an account to Huawei Technologies in respect of past acts of use. On 28 April 2011, Huawei Technologies brought an action for infringement against ZTE before the referring court, seeking an injunction prohibiting the infringement, the rendering of accounts, the recall of products and an award of damages.

In those circumstances, and having regard to the fact that an undertaking to grant licences on FRAND terms created legitimate expectations on the part of third parties that the proprietor of the SEP would in fact grant licences on such terms, a refusal by the proprietor of the SEP to grant a licence on those terms might, in principle, constitute an abuse within the meaning of Article 102 TFEU.

written offer for a licence on such terms, specifying, in particular, the royalty and the way in which it is to be calculated, and

– where the alleged infringer continues to use the patent in question, the alleged infringer has not diligently responded to that offer, in accordance with recognised commercial practices in the field and in good faith, this being a matter which must be established on the basis of objective factors and which implies, in particular, that there are no delaying tactics.

In conclusion, in the EU, a FRAND encumbered SEP holder would violate competition law if it sought an injunction in patent litigation against the implementer especially if the user acted in a way that was consistent with being a ‘willing licensee’.<sup>14</sup>

### **2.1.2 Abuse of Dominance via Misuse of Regulatory Procedures**

Another aspect of interplay between patents and competition law may be seen via the IP holders using their right to the SPCs and abusing the regulatory procedures in relation to it. The SPC is a right that extends the duration of the exclusive right for the duration of marketing authorisation (which shall be no longer than five years in the EU). Often this right is abused by the patent holders to prevent/delay the entry of generic products in the market.

Among the most prominent examples of such abuse is the *AstraZeneca-Losec*<sup>15</sup> case. The EC fined the Anglo-Swedish group AstraZeneca €60 million for misusing regulatory and patent strategies for one of its medicinal products, Losec. In particular, AstraZeneca was found guilty of delaying the market entry of competing generic products by: (a) deliberately making misleading representations before the patent offices and/or courts of several European Economic Area (EEA) Member States, and inducing them to grant extended patent protection for Losec in the form of SPCs to which the product was not entitled; and (b) preventing parallel imports by deregistration of Losec’s marketing authorisations (at that time, generic products could only be marketed, and parallel importers only obtain import licenses, if there was an existing reference marketing authorisation for the product).

As a result of the investigation, the EC concluded that AstraZeneca’s conduct amounted to an abuse of its dominant position. The EC’s decision was appealed to the General Court of the EU (GC).<sup>16</sup> In its judgement the GC confirmed the EC’s findings, but reduced the fine to €52.5 million, as, in GC’s opinion, the EC did not provide evidence that AstraZeneca’s conduct was objectively of a nature intended to exclude parallel imports. At the same time, the GC rejected the argument that the conditions of competition would not be normal/the same on the pharmaceutical market and that exceptional circumstances would be required for a pharmaceutical manufacturer to hold a dominant position. Finally, the GC confirmed that, to

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<sup>14</sup>Freshfields (n 5).

<sup>15</sup>Case COMP/A.37.507/F3 *AstraZeneca* (2005) OJ L 332/24.

<sup>16</sup>Case T-321/05 *AstraZeneca v Commission* (2010) ECLI:EU:T:2010:266.

constitute an abuse, a company's behaviour: does not necessarily need to have a direct effect on competition (the capacity to restrict competition may be indirect); and does not require an intention to cause harm (since abuse of dominance is an objective concept).

The case was further appealed to the CJEU.<sup>17</sup> In its judgement, the CJEU rejected all of AstraZeneca's arguments, including its challenge of the relevant market definition and of the finding that AstraZeneca's patent and regulatory strategies constituted an abuse of a dominant position. Hence, the CJEU fully supported the position and findings of the GC.

### 2.1.3 Abuse of Dominance via Excessive Pricing

Excessive pricing may be regarded as a practice against competition rules if implemented by an undertaking in a dominant position in the relevant market. IP right holders do enjoy some form of market strength and very often are considered as dominant, hence they do bear an additional responsibility when it comes to their commercial practices. Setting up excessively high pricing by the patent holding undertaking may infringe competition law. One of the most recent examples is the EC's formal investigation launched in May 2017 into Aspen Pharma's pricing of five cancer drugs.<sup>18</sup> The EC is investigating whether Aspen Pharma abused its dominant position within Article 102 TFEU by imposing significant price increases for the drugs in question. The EC also investigated allegations that Aspen Pharma threatened to (or did) withdraw the drugs in some EU Member States.<sup>19</sup>

Cases of unfair/excessive pricing as an abusive practice are notoriously complex, and the EC's investigation of Aspen Pharma led to allegations that it is acting as an unofficial price regulator together with the authorities that have primary responsibility for drug procurement. One of the main reasons for non-intervention of the competition authorities in such cases is the difficulty in evaluating what constitutes excessive. This is confirmed by a limited case law and practice currently in place. Some jurisdictions like the US do not consider conduct of undertakings with market power as merely exploiting customers that results in an abuse of dominance. Turkey follows the EU approach where excessive pricing is regarded as one of the practices that may be prohibited if practiced by a dominant company (indirectly via 'unfair pricing' concept under Article 102 of the TFEU).

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<sup>17</sup>Case C-457/10P *AstraZeneca v Commission* (2012) ECLI:EU:C:2012:770.

<sup>18</sup>COMP/ 40394 *Aspen* (2017).

<sup>19</sup>The EC investigation does not include Italy because the Italian competition authority already adopted a relevant decision on 29 September 2016 concluding that Aspen abused its dominant position by setting 'unfair prices' (up to 1500% price increase) and imposing a fine of €5 million. See 'Antitrust: Commission Opens Formal Investigation into Aspen Pharma's Pricing Practices for Cancer Medicines' (*Europa*, 2017) <[http://europa.eu/rapid/press-release\\_IP-17-1323\\_en.htm](http://europa.eu/rapid/press-release_IP-17-1323_en.htm)> accessed 8 December 2017.

Specific parameters for establishing the excessive prices as a violation of the EU competition law were first determined by the CJEU in the *United Brands*<sup>20</sup> case back in 1978. In order to determine that the excessive pricing exists, it is necessary to verify whether (i) the difference between cost incurred and price charged is excessive, and (ii) if yes, whether the price imposed is either unfair in itself or when compared with competing products.<sup>21</sup> This ‘two-step’ test has been frequently applied by EC, as well as recently confirmed by the CJEU in its *AKKA/LAA*<sup>22</sup> judgement in 2017. The CJEU in *AKKA/LAA* judgement emphasizes that the difference in rates following the price comparison must be significant and not temporary to be considered as appreciable and hence abusive. The concept of ‘significant’ is rather vague and subjective depending on the circumstances of each case. Even so, these factors are ‘merely indicative’ of abuse of a dominant position. In such situations, it is for the undertaking holding a dominant position to show that its prices are fair by reference to objective factors that may have an impact on management expenses; and it is up to the national competition authority to assess the circumstances of each specific case.

#### **2.1.4 Anticompetitive Agreements: Restricting Competitors’ Entry to the Market or ‘Paying off Competition’**

Patent holders prolonging their patent protection very often resort to anticompetitive agreements with potential competitors/new entrants and thereby ‘pay off competition’. This is particularly common for the pharmaceutical sector.

In the field of pharmaceuticals, there has been, for some time, competition concern about practices of pharmaceutical companies that might be delaying entry of new, innovative and cheaper generic medicines onto the market.<sup>23</sup> PSAs, like any other agreements, are subject to competition law, and under certain circumstances, these agreements may be considered contrary to competition law. As expiry of the patent term approaches and medicines lose patent protection, originators are increasingly confronted with the prospect of competition from generics (with significantly lower prices). Originators in many instances enter into patent-related procedures/disputes/litigation in order to delay the entry of generics in the market. Normally originators claim that their patents have been infringed by generics who have introduced their own versions of the product prior to expiry of the patents. Generics in turn deny such infringement and contest the validity of the patents. In such circumstances, PSAs are a fast and economical way to end patent

<sup>20</sup>Case C-27/76 *United Brands and United Brands Continentaal v Commission* (1978) ECLI:EU:C:1978:22.

<sup>21</sup>ibid, para 252.

<sup>22</sup>Case C-177/16 *Autortiesību un komunicēšanās konsultāciju aģentūra/ Latvijas Autoru apvienība v Konkurences padome* (2017) ECLI:EU:C:2017:689.

<sup>23</sup>Freshfields (n 5).

disputes, particularly where both parties recognise the merits of settlement and decreased litigation costs.

In all PSA cases so far investigated by competition authorities, the ‘initial concerns stemmed from the fact that the settlements under scrutiny involved ‘large’ payments from patent holder to the generic entrant’.<sup>24</sup> Settlement agreements containing restrictions beyond the exclusionary zone of the patent (e.g. beyond its geographic scope, its period of protection etc.) or regarding patents for which the patent holder knows that the patentability criteria are not met (e.g. lack of inventive step, incorrect, misleading or incomplete information etc.) can also be regarded as problematic agreements.<sup>25</sup> PSAs can be categorised into agreements: with no limitation of generic entry; and with limitation of generic entry (with or without the transfer of money).

In the case of *Citalopram*,<sup>26</sup> the EC fined the Danish pharmaceutical group Lundbeck €93.8 million and four generic companies (Alpharma, Arrow, Ranbaxy and MercK) a total of €52.2 million. The EC found that the companies concluded agreements concerning citalopram/antidepressants in order to prevent the market entry of competing generic versions of citalopram following patent expiry. The agreements involved significant value transfers (by way of direct payments, as well as the purchase of generic citalopram stock for destruction) from Lundbeck to its generic competitors. The EC concluded that the agreements thus constituted ‘pay-for-delay’ agreements, which violated Article 101 TFEU. The case was appealed before the GC. Lundbeck believed that the EC’s decision contains several ‘serious legal and factual errors’,<sup>27</sup> and was requesting that the GC annuls the decision and/or reduces the fine imposed. Eventually the GC in September 2016 fully rejected Lundbeck’s arguments and fully upheld the EC’s findings and ruled that pay-for-delay agreements were in breach of EU competition law.<sup>28</sup> The GC also noted that ‘irrespective of any patent dispute, generics competitors agreed with Lundbeck to stay out of the market in return for value transfers [...] which

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<sup>24</sup>Pierre Regibeau, ‘Further Thought on ‘pay-for-delay’ Settlements’ (2014) 2 *Concurrences* 12, 19.

<sup>25</sup>6th Report on the Monitoring of Patent Settlements (period: January–December 2014) (*Europa*, 2 December 2015) <[http://ec.europa.eu/competition/sectors/pharmaceuticals/inquiry/patent\\_settlements\\_report6\\_en.pdf](http://ec.europa.eu/competition/sectors/pharmaceuticals/inquiry/patent_settlements_report6_en.pdf)> accessed 15 May 2016.

<sup>26</sup>Case COMP/AT.39226 *Lundbeck* (2013).

<sup>27</sup>‘Lundbeck Appeals European Commission Decision’ (*Lundbeck*, 2 September 2013) <<http://investor.lundbeck.com/releasedetail.cfm?ReleaseID=788105>> accessed 5 August 2014.

<sup>28</sup>Cases T-472/13 *H. Lundbeck A/S and Lundbeck Ltd v European Commission* (2016) ECLI:EU:T:2016:449; T-460/13 *Sun Pharmaceutical Industries and Ranbaxy (UK) v Commission* (2016) ECLI:EU:T:2016:453; T-467/13 *Arrow Group and Arrow Generics v Commission* (2016) ECLI:EU:T:2016:450; T-469/13 *Generics (UK) v Commission* (2016) ECLI:EU:T:2016:454; T-470/13 *Merck v Commission* (2016) ECLI:EU:T:2016:452; T-471/13 *Xellia Pharmaceuticals and Alpharma v Commission* (2016) ECLI:EU:T:2016:460.

constituted a ‘buying-off of competition’,<sup>29</sup> which is a restriction of competition that cannot be tolerated. Moreover, such agreements could not be justified by a legitimate need of IP rights protection.

In *Fentanyl* case,<sup>30</sup> the EC was concerned about a so-called ‘co-promotion’ agreement between the Dutch subsidiaries of the US pharmaceutical company Johnson & Johnson (Janssen-Cilag) and the Swiss company Novartis (Sandoz), entered in 2005. The main aim of the agreement was to avoid the companies competing against each other, thus depriving users of fentanyl in the Netherlands to access a cheaper painkiller. The agreement foresaw monthly payments from Janssen-Cilag to Sandoz if no generic product was launched in the Dutch market. Consequently, Sandoz abstained from entering the market with generic fentanyl patches for the duration of the agreement from July 2005 until December 2006. This may have delayed the entry of a cheaper generic medicine for 17 months and kept prices for fentanyl in the Netherlands artificially high. The key concern was that the agreed monthly payments exceeded the profits that Sandoz expected to obtain from selling its generic product, for as long as there was no generic entry. The EC concluded that the agreement breached Article 101 TFEU and imposed fines of €10,798,000 on Johnson & Johnson and €5,493,000 on Novartis.

In *Modafinil* case,<sup>31</sup> the companies Cephalon and Teva settled patent infringement disputes in the UK and the US concerning Modafinil (a treatment for sleeping disorders). As part of the settlement agreement, Teva undertook not to sell its generic Modafinil products on EEA markets before October 2012 and a series of side deals were included in the settlement agreement. The EC opened an investigation to assess whether the PSA violated EU competition law. The investigation is still on going. Statement of objections was sent by the EC in July 2017 stating its preliminary view that a PSA concluded with Cephalon was in breach of EU competition law. Under the agreement, Teva committed not to market a cheaper generic version of Cephalon’s drug for sleep disorders, Modafinil. In other words, the originator company Cephalon agreed to pay Teva to keep its cheaper generic version of Cephalon’s sleep disorder drug Modafinil out of the market.

The *Perindopril* case,<sup>32</sup> concerns an investigation by the EC of practices of the French pharmaceutical company Servier and several of its generic competitors<sup>33</sup> for potentially delaying the generic entry of Perindopril, a cardio-vascular medicine. The EC concluded that Servier had acquired competing technologies to produce perindopril to preserve its position with regard to Perindopril, which was about to reach the end of its patent protection; and induced its generic challengers to

<sup>29</sup>Antitrust: Commission Welcomes General Court Judgements Upholding its Lundbeck Decision in First Pharma Pay-For-Delay Case (*Europa*, 2016) <[http://europa.eu/rapid/press-release\\_MEMO-16-2994\\_en.htm](http://europa.eu/rapid/press-release_MEMO-16-2994_en.htm)> accessed 5 May 2017.

<sup>30</sup>Case COMP/AT.39685 *Fentanyl* (2013).

<sup>31</sup>Case COMP/AT.39686 *Cephalon* (2011).

<sup>32</sup>Case COMP/AT.39612 *Perindopril (Servier)* (2012).

<sup>33</sup>Teva Pharmaceutical Industries, Unichem and its subsidiary Niche, as well as Matrix, which is now known as Mylan Laboratories, Krka and Lupin.

conclude patent settlements. By concluding the agreements, the competitors violated Article 101 TFEU and Servier also abused its dominant position under Article 102 TFEU. The EC imposed a €427.7 million fine<sup>34</sup> on the companies.

## 2.2 Trademarks and Competition Law

The most common competition law issues related to trademarks are anticompetitive restrictive agreements (clauses in the commercial contracts, e.g. prohibition to sell online, qualitative selective distribution, vertical restrictive agreements, etc.). It is not unusual for manufacturers/trademark owners to seek to impose contractual restrictions that prevent retailers from marketing their products via online marketplaces (such as PriceMinister, Amazon and Fnac.com) and internet auction sites (such as eBay). Such contractual clauses usually appear in selective distribution agreements for luxury or highly technical products.

On the one hand such contracts with online sales restrictions (normally in selective distribution contracts) may be claimed as anticompetitive due to their restrictive nature,<sup>35</sup> on the other hand the trademark owners may rely on its right to protect the reputation and image of the brand to justify the restriction, particularly when it comes to the luxury brands. Here we come across the issue of how to assess this luxury image or ‘an aura of luxury’ justification. It was recognised by the CJEU in *Dior*<sup>36</sup> case, whereby:

the proprietor of a trade mark can invoke the rights conferred by that trade mark against a licensee who contravenes a provision in a licence agreement prohibiting, on grounds of the trade mark’s prestige, sales to discount stores [...], provided it has been established that that contravention [...] damages the allure and prestigious image which bestows on them an aura of luxury.

The CJEU in *Coty Germany*<sup>37</sup> delivered its judgement upon the German court application for a preliminary ruling. The dispute under appeal was between Coty Inc. (Coty) and Parfümerie Akzente GmbH (Akzente, an authorized offline distributor of Coty). Coty was suing Akzente in the German court for violating a

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<sup>34</sup>‘Antitrust: Commission Fines Servier and Five Generic Companies for Curbing Entry of Cheaper Versions of Cardiovascular Medicine’ (*Europa*, 9 July 2014) <[http://europa.eu/rapid/press-release\\_IP-14-799\\_en.htm](http://europa.eu/rapid/press-release_IP-14-799_en.htm)> accessed 5 May 2017.

<sup>35</sup>A ban on Internet sales, even in a selective distribution system, is generally prohibited as a hardcore restriction of competition. At the same time the manufacturers remain free to organise their selective distribution network and may require some quality standards.

<sup>36</sup>Case C-59/08 *Copad SA. v Christian Dior couture SA and Others* (2009) ECLI:EU:C:2009:260.

<sup>37</sup>Case C-230/16 *Coty Germany GmbH v Parfümerie Akzente GmbH* (2017) ECLI:EU:C:2017:941 (*Coty* case).

condition under the selective distribution agreement that prohibits Akzente from selling Coty's luxury products (under brands Marc Jacobs, Calvin Klein and Chloe) on open third party online platforms (e.g. Amazon).

'Luxury image' argument that was relied upon by Coty and supported by the CJEU in this case implies that the manufacturer/trademark owner of branded goods shall be able to safeguard the image and prestige of its luxury brand(s), among other, by way of restricting online sales of its distributors on third party's platforms.<sup>38</sup>

The CJEU here refers<sup>39</sup> to the *Pierre Fabre Dermo-Cosmétique*<sup>40</sup> 2009 criteria of the selective distribution systems that have to be observed for the selective distribution to be outside the scope of Article 101(1) TFEU: (i) re-sellers are chosen on the basis of objective criteria of a qualitative nature laid down uniformly for all potential re-sellers and not applied in a discriminatory fashion, (ii) the characteristics of the product in question necessitate such a network in order to preserve its quality and ensure its proper use and, finally, (iii) the criteria laid down do not go beyond what is necessary.

The 'necessity' of the online sales restriction may be explained by the need to preserve the quality of the luxury goods. The quality of such goods is not just the result of their material characteristics, but also 'of the allure and prestigious image which bestow on them an aura of luxury'.<sup>41</sup> The image enables consumers to distinguish them from similar goods. Hence, any impairment to that aura of luxury may affect the actual quality of those goods.<sup>42</sup>

Such online sales restrictions provides the supplier with a guarantee that the goods in question will be exclusively associated with the authorized distributors, which is one of the objectives sought when recourse is made to the selective distribution system. Hence, the bans in relation to sales on third party online platforms in selective distribution systems shall not be treated as a per se restriction of competition law; and a 'luxury image' argument may justify any possible restrictive effect of such clauses.<sup>43</sup>

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<sup>38</sup>The online sale restriction at issue is not absolute. It applies solely to the internet sale of the contract goods via third-party platforms which operate in a 'discernible manner'. See *ibid*, para 52. Hence, authorized distributors shall be permitted to sell the contract goods online: both (i) on their own websites (as long as they have an electronic shop window for the authorized store and the luxury aura of the goods is preserved), and (ii) via unauthorized third party platforms when the use of such platforms 'is not discernible to the customer' See *ibid*, para 55.

<sup>39</sup>Coty case (n 37), para 52.

<sup>40</sup>C-439/09 *Pierre Fabre Dermo-Cosmétique* (2011) ECLI:EU:C:2011:649.

<sup>41</sup>Coty case (n 37), para 25.

<sup>42</sup>See also *Copad* (n 36), paras 24–26.

<sup>43</sup>We repeat that the prohibition shall not be absolute and shall concern only sales of contract goods at third party platforms. Authorized distributors shall be permitted to sell the contract goods online via unauthorized third party platforms when the use of such platforms is 'not discernible' to the customer (although the CJEU has not provided any definition of the notion of 'discernible/not discernible to the customer').

The ‘luxury image’ justification could not be accepted by the competition authorities in France and Germany in the *Adidas* case. Following antitrust probes into online sales restrictions of Adidas in Germany and France, the competition authorities came to conclusion that producer cannot prohibit an authorised reseller from selling its products online by relying on the quality standard justification. Consequently, Adidas had to modify its selective distribution contracts and online sales policy accordingly.<sup>44</sup> Therefore, an absolute ban on online sales would be illegal; however, the trademark owners still have a chance to justify such restrictions by relying on the quality/brand/reputation protection argument. It is important that the restriction does not go far beyond the simple requirement of quality standards.

## 2.3 Copyright and Competition Law

Copyright covers computer programs and software. Companies holding copyright have been investigated by competition authorities more often in the modern (digital) world. Copyright provides some sort of economic power in the market, which may potentially be abused by way of tying, refusal to license, foreclose competitors, as well as using excessive royalties, if implemented by a dominant company. The most prominent example includes the *Microsoft* (refusal to deal and tying), *Intel* (loyalty rebates) and *Google* ('favouring your own content') cases, in all of which the companies-copyright owners were found to be abusing their market position via various practices.

In *Microsoft*<sup>45</sup> case in 2004, the EC found that the company was dominant and held a copyright for a computer program. The investigation commenced based on a complaint filed by Microsoft's competitor to whom Microsoft refused to provide information on interoperability that would enable competitors to develop competing programs for workgroup servers compatible with the Windows platform. Following the investigation the EC fined Microsoft €497 million<sup>46</sup> for abusing its dominant position in the personal computer (PC) operating systems<sup>47</sup> and work group server services, as well as multimedia player market, including by way of (i) refusal to

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<sup>44</sup>On 18 November 2015, the Autorité de la concurrence (the French Competition Authority or FCA) obtained confirmation from Adidas that it will withdraw from its contracts any clauses prohibiting its distributors from using marketplaces for their online sales. ‘When Can Sales Via Online Platforms be Restricted?’ (*Eversheds Sutherland*, 23 December 2015) <<http://consumerhub.eversheds-sutherland.com/retail/when-can-sales-via-online-platforms-be-restricted/>>.

<sup>45</sup>*Microsoft* (n 1).

<sup>46</sup>See T-201/04 *Microsoft v Commission* (2007) ECLI:EU:T:2007:289.

<sup>47</sup>As mentioned in para 71 of the *Microsoft* decision, the operating system product is copyrighted material and, as such, its use can be subjected to licensing conditions that are transferred across the distribution channel.

supply its competitors with interoperability information for operating PC Windows with other systems and to use that information for the purpose of developing/distributing products competing with Microsoft's own products, and (ii) the tied sale of Windows Media Player software together with the Windows client PC operating system, hence leaving no choice for consumers and foreclosing the multimedia player market to smaller competitors.

Normally tying is a good idea as it leads to better product offerings, however there is a risk of foreclosure effect where (i) the tied and tying products are distinct products (depends on customer demand), i.e. it is possible to buy those products separately; (ii) it is a lasting practice; and (iii) it is implemented by the dominant undertaking.

As for the refusal to provide information on interoperability that would enable competitors to develop competing programs for workgroup servers compatible with the Windows platform, it was found to be anticompetitive, since Microsoft is a dominant player and such information was indispensable (essential facility) for the smaller players to enter/stay the relevant market.

On the other hand, the EC's infringement decision in *Intel*<sup>48</sup> imposing a record €1.06 billion fine was appealed to the GC<sup>49</sup> and subsequently to the CJEU,<sup>50</sup> and eventually was referred back to the GC, who is now conducting the new assessment of the evidence and effects of the rebates system provided by Intel. The main message of the CJEU's judgement is that the anticompetitive effect of the loyalty rebates should not be presumed where the undertaking in question argues that its conduct is not capable of restricting competition in the market.

The *Intel* case started with a complaint before the EC brought by the Advanced Micro Devices (AMD) against Intel back in 2000. Following the investigation, the EC found that Intel indeed infringed Article 102 of the TFEU, i.e. abused its dominant position, in particular by granting (i) rebates on condition that original equipment manufacturers (OEMs) would purchase from it all or almost all of their x86 central processing units (CPUs) for use in their computers, and (ii) payments to the largest desktop computer distributor in the EU, Media-Saturn-Holding, on condition that it would be selling exclusively computers containing Intel's x86 CPUs. On top of that, according to the EC, Intel also (iii) provided payments to the OEM's for the postponement or cancellation of the launch of AMD CPU-based products or put restrictions on their distribution. The gravity of the infringements which affected the ability of Intel's competitors to compete justified the fine imposed by the EC.

The CJEU in *Intel* case did not overrule the EC's decision. It addressed three out of six grounds of appeal and referred it back to the GC. It is now for the GC to decide on whether to annul or uphold it (again) depending on the new assessment of

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<sup>48</sup>Case COMP 37/990 *Intel* (2014).

<sup>49</sup>Case T-286/09 *Intel Corporation v European Commission* (2014) ECLI:EU:T:2014:547.

<sup>50</sup>Case C-413/14 P *Intel Corporation Inc. v European Commission* (2017) ECLI:EU:C:2017:632.

the evidence and effects of the case at hand. The CJEU has ruled on the important issues, such as:

- EC's procedural obligations/Intel's right of defence: The CJEU criticised the EC for material procedural mistake affecting Intel's right of defence. This included failing to record adequately and take into account the evidence (a five hr interview with Intel's customer) that had been given by a third party.
- EC's territorial jurisdiction: The CJEU emphasized on the extraterritoriality of the EU competition law, i.e. that activity of an undertaking outside the EU may infringe EU competition law by its effect that is foreseeably 'immediate and substantial'. Behaviors which, while not implemented within the EU, but which have or likely to have an impact on the EU market serve as a basis for the EC's jurisdiction in such cases.
- The CJEU reminded that an undertaking suspected of having infringed Article 102 TFEU could argue that its behavior was not capable of restricting competition. In case such an objection is expressed, the EC is required to examine (i) the extent of the dominant position, (ii) the market coverage of the rebates at issue, (iii) the conditions, the duration and the amount of those rebates, and also (iv) the exclusionary effect of such behaviors on competitors who are at least as efficient as the dominant undertaking ('as efficient competitor test'/adverse effect on competition (AEC) test'). Such an analysis may reveal the exclusionary effect of the behaviors at issue. This could be counterbalanced by advantages in terms of efficiency, which can benefit the consumer.

In summary, the CJEU's judgement in *Intel* case confirms the statement that the anticompetitive effect of the loyalty rebates should not be presumed where the undertaking in question argues that its conduct is not capable of restricting competition in the market.<sup>51</sup> In such situations all the circumstances of the case must be analysed in order to correctly determine whether competition rules have been infringed. Additionally, this judgement is a reminder of the fact that the competition law has extraterritorial effect; and competition authorities must pay due care to the procedural formalities and right of defence of the undertaking(s) under investigation, e.g. to record all evidence, including interviews and meetings.

And finally, the *Google*<sup>52</sup> case, where following the investigation EC decided to penalise Google €2.42 billion for an abuse of dominance by way of promoting its own comparison shopping service (favouring its own content) in its search results. In other words, Google's advertisements enjoyed higher number of clicks as a result of better display/visibility—i.e. Google's own services appeared at the top of the search results, while even the most highly ranked rivals' services appeared on average only on page four or so of Google's search results. According to the EC, such practices significantly affected competition in the market for comparison

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<sup>51</sup>Previous case-law considered that exclusivity rebates granted by dominant undertakings were, *per se*, anticompetitive.

<sup>52</sup>Case AT.39740 *Google Search (Shopping)* (2017).

shopping and allowed Google to make significant gains in traffic at the expense of its competitors and to the detriment of consumers. On the one hand, Google was found violating EU competition law by using its own search engine (software), Google Search, and favouring its own services over those of competitors by making Google's results more visible. But on the other hand, consumers could still visit other sites/platform to compare prices before buying online.

### 3 Conclusion

Competition law issues may arise in any area of IP: patents, trademarks, and/or copyright. In most cases it is the IPR holders with a strong market power (if not dominance) that have to be particularly cautious about competition law implications of their practices, since an undertaking enjoying a dominant position is under a special responsibility not to engage in conduct that may distort competition.

With regards to patents, the most common competition law issues here are related to the abuse of market power via various practices, such as: refusal to license/deal, excessive charges/pricing, unfair/discriminatory licensing, anticompetitive use of SEPs/abusing litigation by SEP holders; delaying market entry of competitors via misuse of patent/regulatory process (SPC), excessive pricing, as well as concluding anticompetitive agreements (PSAs).

When it comes to trademarks, the most common competition law issues that we may come across are anticompetitive restrictive agreements (clauses in the commercial contracts, e.g. prohibition to sell online, qualitative selective distribution, vertical restrictive agreements, etc.). It is not unusual for trademark owners to impose contractual restrictions that prevent retailers from marketing their products via online marketplaces. Such contractual clauses usually appear in selective distribution agreements for luxury or highly technical products and subject to strict criteria and/or ‘luxury brand image’ justification in relation to online sale prohibitions (as recently confirmed by *Coty* case).

Copyright, just like patents and trademarks, provides some sort of economic power in the market, which may potentially be abused by way of tying, refusal to license, foreclose competitors, as well as using excessive royalties, if implemented by a dominant company.

Recent enforcement of competition law in the sphere of patents (SEPs), trademarks and copyright in various industries shall significantly affect the legal landscape for the IP right owners; patent holders must now, more routinely, consider how competition law may impact the exercise of their IP rights. In that respect, competition compliance programs and competition law due diligence is very much advisable to identify and avoid competition law related risks.

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## **Chapter 2**

# **The Interaction Between Intellectual Property Law and Competition Law in the EU: Necessity of Convergent Interpretation with the Principles Established by the Relevant Case Law**



**Nikolaos E. Zevgolis**

## **1 Introduction**

The fact that the interaction between competition law and intellectual property (IP) law continues to raise new questions and give rise to opportunities for debates is not something novel. However, the European Commission's hope is considered crystal clear: On the one hand to free resources for the proactive estimated value of new policy areas, and on the other hand to secure and guarantee 'the uniform application of European Union's (EU) Competition Law through procedural guidance and economic, effect-based substantive rules'.<sup>1</sup> This is the reason why the European Commission (EC) does not favor a *per se* approach regarding this specific issue.<sup>2</sup> Therefore, it is not incidental that not only market participants but also competition watchdogs have accepted, 'sometimes even fostered', standard setting because of its beneficial effects: *inter alia*, standardization ensures interoperability of standard-based

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<sup>1</sup>See Ralf Boscheck, 'Patent Trolls: In Search of Efficient Regulatory Standards' (2016) 39 World Competition 67, 84, quoting: 'This approach is very much in line with the evolution of the EU competition law regime and its shift from centralized authorization to decentralized enforcement through national authorities, courts and undertakings themselves'.

<sup>2</sup>Alexander Italianer, 'The Object of Effects' (CRA Annual Brussels Conference—Economic Developments in Competition Policy, Brussels, 10 December 2014), quoting that: 'there is a clear case law demanding an analysis of effects'.

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products, it renders these products more comparable for consumers<sup>3</sup> and it can help to select the ‘best’ available technical solution for a given task.<sup>4</sup> An individual who uses, for instance, a smartphone or a laptop can easily understand the reasons for standardization.

## **2 The Adequacy (or Inadequacy?) of the European Commission’s Soft Law**

### ***2.1 Main Provisions in the Horizontal Cooperation Guidelines 2011/C 11/01: The Rule (IPR Are Pro-competitive) and the Exceptions***

IP laws and competition laws share two main targets: promotion of innovation and enhancement of consumer welfare. According to para 269 of the Horizontal Cooperation Guidelines, Intellectual Property Rights (IPRs) ‘promote dynamic competition by encouraging undertakings to invest in developing either new or improved products and processes’. This is the reason why IPR are considered ‘*in general pro-competitive*’.<sup>5</sup> Nevertheless, because of IPR, ‘a participant holding IPR essential for implementing the standard,<sup>6</sup> could, in the specific context of

<sup>3</sup>European Commission Guidance on the Enforcement Priorities in Applying Article [102 TFEU] to Abusive Exclusionary Conduct by Dominant Undertakings 2009 OJ (C 45) 7–20, para 5:

Consumers benefit from competition through lower prices, better quality and a wider choice of new or improved goods and services. The Commission, therefore, will direct its enforcement to ensuring that markets function properly and that consumers benefit from the efficiency and productivity which result from effective competition between undertakings.

<sup>4</sup>Peter Picht, ‘The ECJ Rules on Standard essential Patents: Thoughts and Issues Post-Huawei’ (2016) 37 ECLR 365.

<sup>5</sup>See ‘Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-Operation Agreements’ 2011/C 11/01 (Horizontal Cooperation Guidelines), para 269.

<sup>6</sup>para 263 of the Horizontal Cooperation Guidelines:

standards normally increase competition and lower output and sales costs, benefiting economies as a whole. Standards may maintain and enhance quality, provide information and ensure interoperability and compatibility (thus increasing value for consumers).

standard-setting, also acquire control over the use of a standard'.<sup>7</sup> In cases where 'the standard constitutes a barrier to entry',<sup>8</sup> Standard Essential Patent (SEP) holder 'could thereby control the product or service market to which the standard relates'.<sup>9</sup> This situation, when it happens, could allow SEP holder to behave in anticompetitive ways: for instance, by 'holding up' users after the adoption of the standard either by refusing to license the necessary IPR or by extracting excessive<sup>10</sup> royalty fees, it can prevent effective access to the standard.<sup>11</sup> However, there should not be a misunderstanding: even if the establishment of a standard is in a position to create or increase the market power of IPR holders possessing IPR essential to the

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<sup>7</sup>Horizontal Cooperation Guidelines (n 5).

<sup>8</sup>ibid. About this kind of barrier to entry, the following ought to be underlined: According to Horizontal Cooperation Guidelines (n 5), para 266, in the hypothetical case where 'one technology has been chosen and the standard has been set, competing technologies and companies may face a barrier to entry and may potentially be excluded from the market'. Furthermore, according to the same para, 'standards requiring that a particular technology is used exclusively for a standard or preventing the development of other technologies by obliging the members of the standard setting organization to exclusively use a particular standard, may lead to the same effect. The risk of limitation of innovation is increased if one or more companies are unjustifiably excluded from the standard-setting process'.

<sup>9</sup>Horizontal Cooperation Guidelines (n 5).

<sup>10</sup>However, it ought to be underlined that, in terms of competition law high royalty fees can only be qualified as excessive in case that the pre conditions for an abuse of a dominant position are fulfilled according to Article 102 TFEU and the settled case-law of the Court of Justice of the European Union. See indicatively Case 27/76 *United Brands v Commission* (1978) ECLI:EU:C:1978:22.

<sup>11</sup>This is the reason why it is acceptable (Horizontal Cooperation Guidelines, para 264) that standard-setting can, in specific circumstances, give rise to restrictive effects on competition by potentially restricting price competition and limiting or controlling production, markets, innovation or technical development. This can happen through three main channels, namely reduction in price competition, foreclosure of innovative technologies and exclusion of, or discrimination against, certain companies by prevention of effective access to the standard. More specifically, standardization may lead to anticompetitive results by preventing certain undertakings from obtaining effective access to the results of the standard-setting process (ie, the specification and/or the essential IPR for implementing the standard). According to Horizontal Cooperation Guidelines, para 268, in the case that 'a company is either completely prevented from obtaining access to the result of the standard or is only granted access on prohibitive or discriminatory terms, there is a risk of an anticompetitive effect'. A contrario, according to the same para:

a system where potentially relevant IPR is disclosed up-front may increase the probability of effective access being granted to the standard since it allows the participants to recognize and define which technologies are covered by IPR and which are not. This enables the participants to both factor in the potential effect on the final price of the result of the standard (for instance, choosing a technology without IPR is likely to have a positive effect on the final price) and to verify with the IPR holder whether they would be willing to license if their technology is included in the standard.

standard, there is no presumption that holding exercising IPR essential to a standard equates to the possession or exercise of market power.<sup>12</sup> The EC recognizes that the question of market power cannot be answered by *per se* ruling; *a contrario*, it can only be assessed on a case-by-case analysis.

## 2.2 *Preconditions for Pro-competitive Standard-Setting*

### 2.2.1 The Central Issue of Access to the Standard

According to the Horizontal Cooperation Guidelines,<sup>13</sup> where participation in standard-setting is *unrestricted* and the procedure for adopting the standard in question is *transparent*, standardization agreements which contain no obligation to comply with the standard and provide access to the standard on fair, reasonable, and non-discriminatory (FRAND) terms will normally not restrict competition within the meaning of Article 101 para 1 TFEU. At this point, it must be clarified that any standard-setting agreement which makes a discrimination or even distinction against any of either the participating or potential members could have as a result a restriction of competition. For instance, in a case that because of a standard setting organization (SSO) upstream only companies are explicitly excluded (i.e. companies which are not active on the downstream production market), this could lead to an exclusion of potentially better technologies.<sup>14</sup>

Furthermore, para 280 ought to be read in combination with para 293 of the same Guidelines. According to this last paragraph, whether standardization agreements may raise concerns about restrictive effects on competition may depend on whether the members of a SSO remain (or not remain) free to develop alternative standards or products that do not meet the requirements demanded by the agreed

<sup>12</sup>At this point it should be underlined that, according to the Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings. See Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, 2009/C 45/02 (Abusive Exclusionary Conduct):

In accordance with the case-law, it is not in itself illegal for an undertaking to be in a dominant position and such a dominant undertaking is entitled to compete on the merits. However, the undertaking concerned has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market.

<sup>13</sup>Horizontal Cooperation Guidelines (n 5), para 280.

<sup>14</sup>ibid, para 297.

standard.<sup>15</sup> For instance, in case that the standard-setting agreement binds the members to only produce products in compliance with the standard, the risk of a likely negative effect on competition is significantly increased and could in certain circumstances give rise to a restriction of competition by object.<sup>16</sup> A *contrario*, standards only covering aspects of minor importance or parts of the end-product are considered less likely to give rise to competition concerns than more comprehensive standards.

In addition, the assessment whether the agreement restricts or not competition will also focus on the central issue of *access to the standard*. In case that the result of a standard (i.e. according to Horizontal Cooperation Guidelines, para 294, the:

specification of how to comply with the standard and, if relevant, the essential IPR for implementing the standard') is not at all accessible, or only accessible on discriminatory terms, for members or third parties (non-members of the relevant standard-setting organization)

This barrier to entry<sup>17</sup> and/or segmentation ‘may discriminate or foreclose or departmentalize markets according to their geographic scope of application and thereby possibly restrict competition’. Nevertheless, ‘in the case of several competing standards or in the case of effective competition between the standardized

<sup>15</sup>See for example, the Commission Decision in Case IV/29/151 *Philips/VCR* OJ L 47, 18 February 1978, para 23:

As these standards were for the manufacture of VCR equipment, the parties were obliged to manufacture and distribute only cassettes and recorders conforming to the VCR system licensed by Philips. They were prohibited from changing to manufacturing and distributing other video cassette systems ... This constituted a restriction of competition under Article 85(1)(b).

<sup>16</sup>ibid.

<sup>17</sup>Barriers to entry (or expansion) can take various forms. They may be either legal barriers (for example, tariffs or quotas), or they may take the form of advantages specifically enjoyed usually by undertakings with (single) dominant position: for instance, privileged access to essential inputs or natural resources, important technologies. See Case T-30/89 *Hilti v Commission* [1991] ECR II-1439, para 19. Economies of scale and/or scope, an established distribution and sales network, Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, para 48. They may also include costs and other types of hindrance (for example, resulting from network effects, faced by customers in switching to a new supplier). According to the Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings:

economies of scale mean that competitors are less likely to enter or stay in the market if the dominant undertaking forecloses a significant part of the relevant market. Similarly, the conduct may allow the dominant undertaking to ‘tip’ a market characterised by network effects in its favour or to further entrench its position on such a market. Likewise, if entry barriers in the upstream and/or downstream market are significant, this means that it may be costly for competitors to overcome possible foreclosure through vertical integration [...].

solution and non-standardized solution,<sup>18</sup> a case-by-case analysis is demanded: even a limitation of access may not produce restrictive effects on competition.<sup>19</sup>

Supposing that participation in the standard-setting process is open, in the sense that it allows all competitors (active or potential and/or stakeholders) in the market affected by the standard to participate in choosing and elaborating the standard, this will eliminate the risks of a likely restrictive effect on competition by not excluding certain undertakings from the ability and the opportunity to influence the choice and elaboration of the standard.<sup>20</sup> The greater the likely market impact of the standard, and the wider its potential fields of application, the more important it is to allow equal access to the standard-setting process. However, if the facts of the case show that there is competition between several such standards and SSOs (and not necessarily the same standards are applied by the whole industry) perhaps there will not be any anticompetitive effects. Furthermore, according to Horizontal Cooperation Guidelines, para 295, ‘if in the absence of a limitation on the number of participants it would not have been possible to adopt the standard, the agreement would not be likely to lead to any restrictive effect on competition under Article [101 para 1 TFEU]’. Or if the adoption of the standard would have been heavily delayed by an inefficient process, any initial restriction could be counterbalanced by efficiencies which should be considered more significant under Article 101 para 3 TFEU.<sup>21</sup> According to the same para of the Horizontal Cooperation Guidelines:

[i]n certain situations the potential negative effects of restricted participation may be overcome or at least restricted by ensuring that stakeholders are kept informed and consulted on the work in progress.<sup>22</sup> The rule is that ‘the more transparent the procedure for adopting the standard, the more likely it is that the adopted standard will take into account the interests of all stakeholders’.<sup>23</sup>

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<sup>18</sup>Horizontal Cooperation Guidelines (n 5), para 294.

<sup>19</sup>ibid.

<sup>20</sup>In Case IV/31.458 *X/Open Group* OJ L35, 6 February 1987, para 32: the European Commission considered that even if the standards adopted were made public, the restricted membership policy had the effect of preventing non-members from influencing the results of the work of the group and from getting the know-how and technical understanding relating to the standards which the members were likely to acquire. In addition, non-members could not, in contrast to the members, implement the standard before it was adopted. This is the reason why the agreement was—under these specific circumstances—considered that it constituted a restriction of competition under Article 101 para 1 TFEU.

<sup>21</sup>Nevertheless, it ought to be underlined that the four preconditions for the application of Article 101 para 3 TFEU ought to be concurrent cumulatively.

<sup>22</sup>See Case COMP/39.416 *Ship Classification* (2010) OJ C2/05.

<sup>23</sup>See Horizontal Cooperation Guidelines (n 5), para 295.

## 2.2.2 The Significance of Market Shares of the Goods or Services Based on the Standard

To assess the effects of a standard-setting agreement, the market shares of the goods or services based on the standard ought to be considered. One of the main problems is that, according to Horizontal Cooperation Guidelines, para 296:

it might not always be possible to assess with a minimum of certainty at an early stage whether the standard will in practice be adopted by a large part of the industry, or whether it will only be used by a very small part of the industry'. Therefore, 'in many cases the relevant market shares of the companies having participated in developing the standard could be used as a sign or indication for assessing the likely market share of the standard; the reason is that the companies participating in setting the standard would in most cases have an interest in implementing the standard.<sup>24</sup>

Nevertheless, according to the same para of the Horizontal Cooperation Guidelines:

as the effectiveness of [standardization] agreements is often proportional to the share of the industry involved in setting and/or applying the standard, high market shares held by the parties in the market or markets affected by the standard will not necessarily lead to the conclusion that the standard is likely to give rise to restrictive effects on competition.<sup>25</sup>

So, a case-by-case analysis is demanded. Market shares provide a useful first indication of the market structure and of the relative importance of the various undertakings active on the market.<sup>26</sup> However, the EC and the national competition authorities will assess market shares in the light of the relevant market conditions, and the dynamics of the market and of the extent to which there is a product differentiation (if there is such and to which extent there is). In addition, the trend or development of market shares over time may also be considered in volatile markets or in markets where auctions take place.<sup>27</sup>

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<sup>24</sup>ibid, para 296.

<sup>25</sup>ibid.

<sup>26</sup>Case 85/76 *Hoffmann-La Roche & Co. v Commission* [1979] ECR 461, paras 39–41; Case C-62/86 *AKZO v Commission* [1991] ECR I-3359, para 60; Case T-30/89 *Hilti v Commission* [1991] ECR II-1439, paras 90–92; Case T-340/03 *France Télécom v Commission* [2007] ECR II-107, para 100.

<sup>27</sup>See Abusive Exclusionary Conduct (n 12), para 13.

### 2.2.3 Result of Standardization Agreements

Standardization agreements frequently create the necessary preconditions for significant static<sup>28</sup> and dynamic efficiency gains.<sup>29</sup> For instance, Union wide standards may facilitate market integration<sup>30</sup> and allow companies to market their goods and services in all Member States, leading on the one hand to increased consumer choice and on the other hand decreasing prices.<sup>31</sup> More specifically, market integration cannot only be facilitated but also enhanced—the creation of a common market lay at the heart of the EU project, transaction costs can be reduced, the necessary time for innovative products offered to end users can be minimized, interoperability between network and products can be reduced etc. According to the Horizontal Cooperation Guidelines para 308, ‘standards which establish technical interoperability and compatibility often encourage competition on the merits between technologies from different enterprises and help prevent lock-into one supplier’.<sup>32</sup> In addition, transaction costs may be reduced due to standards in a very profitable way not only for sellers but also for buyers. For example, standards

<sup>28</sup>Both allocative efficiency and productive efficiency constitute the so-called static efficiency. See Massimo Motta, *Competition Policy. Theory and Practice* (Cambridge University Press 2004) 45–55; Robert H Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York: Basic Books 1978, reprinted with a new Introduction and Epilogue 1993) 90–91.

<sup>29</sup>See Emanuelson Anna, ‘Standardization Agreements in the Context of the New Horizontal Guidelines’ (2012) 33 ECLR 69. However, in theory it has also been recognized that:

[w]hen asked to examine a restrictive agreement or a merger, the test to be performed by competition authorities essentially amounts to determining whether the negative effects of the agreement/transaction on competition is more than compensated by ‘efficiencies’ taking the form of the production of new and/or better products, the realization of economies of scale or scope etc. Such a balancing test will not necessarily be easy as parties to a proceeding will generally try to inflate the ‘negative’ or ‘positive’ effects of the agreement/merger in question.

See Damien Geradin, ‘Efficiency Claims in EC Competition Law and Sector Specific Regulation’ (Comparative Competition Law—Whose Regulation, Which Regulation? Workshop Florence, 12 and 13 November 2004) 1.

<sup>30</sup>Regarding this issue, see indicatively Catherine Barnard, *The Substantive Law of the EU: The Four Freedoms* (3rd edn, OUP 2010) 14–17.

<sup>31</sup>This point of view is close enough to the point of view of a large part of Post-Chicago school, which considers efficiency as one of the purposes of antitrust, but not the only one. See, for instance, Eleanor M Fox, ‘The Modernization of Antitrust: A New Equilibrium’ (1981) 66 CORNELL L. REV. 1140, 1152, 1154; Robert Pitofsky, ‘The Political Content of Antitrust’ (1979) 127 U. PA. L. REV. 1051, 1057. A *contrario*, ‘The fundamental Chicago view is that the pursuit of efficiency, by which is meant allocative efficiency as defined by the market, should be the sole goal of antitrust’. See Alison Jones & Brenda Sufrin, *EC Competition Law (Text, cases and materials)* (2nd edn, OUP 2004) 22; Eleanor M Fox and Lawrence A Sullivan, ‘Antitrust—Retrospective and Prospective: Where Are We Coming From? Where Are We Going?’ (1987) 62 New York Univ. LR 936, 956–959.

<sup>32</sup>Horizontal Cooperation Guidelines (n 5), para 308.

regarding safety, quality or/and environmental aspects of a product (a ship, for instance) may also facilitate consumers' choice and can lead to increased product quality. Furthermore, standards play a significant role for innovation (it is about the so-called dynamic efficiency). According to the Horizontal Cooperation Guidelines paras 308 and 309, these standards:

can reduce the time it takes to bring a new technology to the market and facilitate innovation by allowing undertakings to build on top of agreed solutions. To achieve those efficiency gains in the case of standardization agreements, the information necessary to apply the standard must be effectively available to those potentially wishing to enter the market.

In this regard, the Commission's Decision in Case IV/31.458, *X/Open Group* is characteristic: 'The Commission considers that the willingness of the Group to make available the results as quickly as possible is an essential element in its decision to grant an exemption'.<sup>33</sup>

It is useful to be clarified that dissemination of a standard may be enforced by marks or logos which certify compliance thereby providing the demanded certainty to customers. However, agreements for testing and certification go beyond the primary objective of defining the standard; this is the reason why they usually constitute a distinct, separate paragraph not only agreement but also market.<sup>34</sup>

From the above-mentioned analysis, it is clear that the effects on innovation ought to be analyzed on a case-by-case basis. Nevertheless, there is rebuttable presumption that standards creating compatibility on a horizontal level between different technology platforms are considered to be likely to give rise to efficiency gains.<sup>35</sup>

## 2.3 Main Provisions in the Commission Notice Guidelines on the Application of Article 101 TFEU to Technology Transfer Agreements<sup>36</sup>

### 2.3.1 The Principle of Union Exhaustion

According to the Commission Notice Guidelines on the Application of Article 101 TFEU to technology transfer agreements,<sup>37</sup> IP laws give exclusive rights on holders

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<sup>33</sup> *X/Open Group* (n 20), para 42.

<sup>34</sup> Horizontal Cooperation Guidelines (n 5), para 310.

<sup>35</sup> See Horizontal Cooperation Guidelines (n 5), para 311.

<sup>36</sup> Commission Notice Guidelines on the Application of Article 101 TFEU to Technology Transfer Agreements, (2014/C 89/03) (Application of Article 101 TFEU to TTA).

<sup>37</sup> *ibid*, para 5.

of patents, copyrights, design rights, trademarks and other legally protected rights. The owner of IP is protected under IP laws that prevent its unauthorized use and exploitation, for instance, by licensing it to third parties. However, according to the principle of Union exhaustion,<sup>38</sup> once a product incorporating an IPR, with the exception of performance rights (rental rights are also included<sup>39</sup>), has been put on the market inside the European Economic Area (EEA) by the holder or with its approval, the IPR is exhausted in the sense that the holder can no longer use it to control the sale of the product. This principle of Union exhaustion is for instance enclosed in Article 7 para 1 of Directive 2008/95/EC to approximate the laws of the Member States relating to trademarks,<sup>40</sup> according to its provision, the trademark shall not entitle the proprietor to prohibit its use in relation to goods which have been put on the market in the Union under that trademark by the proprietor or with its approval. The same principle is also enshrined in Article 4 para 2 of Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs<sup>41</sup> where there is the provision that the first sale in the Union of a copy of a program by the right holder or with its approval will exhaust the distribution right within the Union of that copy (except for the right to control further rental of the program or a copy thereof).<sup>42</sup> The holder of an IPR has no right under IP laws to prevent sales by licensees or buyers of such products incorporating the licensed technology. Against the backdrop of this rule, the principle of Union exhaustion is considered compatible with the essential function of IPRs, which is to grant the holder the right to exclude others from exploiting its IP without its consent.<sup>43</sup>

<sup>38</sup>It is about one of the main principles in the EU. According to the Court of the European Union:

[...] it must be recalled that the objective of the principle of the exhaustion of the right of distribution of works protected by copyright is, in order to avoid partitioning of markets, to limit restrictions of the distribution of those works to what is necessary to safeguard the specific subject-matter of the intellectual property concerned.

See, C-128/11 *UsedSoft GmbH v Oracle International Corp.* [2012] ECR 407, para 62. See also to that effect, Case C-200/96 *Metronome Musik* [1998] ECR I-1953, para 14; Case C-61/97 *FDV* [1998] ECR I-5171, para 13; and Case C-403/08 *Football Association Premier League and Others* [2011] ECR I-9083, para 106.

<sup>39</sup>In this respect, see Case 158/86 *Warner Brothers and Metronome Video* [1988] ECR 2605; Case C-61/97 *Foreningen af danske videogramdistributører* [1998] ECR I-5171.

<sup>40</sup>OJ L 299, 8 November 2008, para 25.

<sup>41</sup>OJ L 111, 5 May 2009, para 16.

<sup>42</sup>See in this respect *UsedSoft GmbH* (n 38).

<sup>43</sup>Application of Article 101 TFEU to TTA, para 6.

### 2.3.2 No Immunity from Competition Law Intervention

In general, it is acceptable that IP laws grant exclusive rights of exploitation.<sup>44</sup> Nevertheless, this fact does not entail that IPRs enjoy a kind of immunity from competition law intervention. The application of Article 101 TFEU is possible regarding agreements whereby the holder licenses another undertaking to exploit its IPRs.<sup>45</sup> ‘Nor does it imply that there is an inherent conflict between IPRs and the Union competition rules’.<sup>46</sup> In reality, both bodies of law have the same twofold basic objective: on the one hand promoting consumer welfare and on the other hand an efficient allocation of resources. Innovation constitutes perhaps the most essential and dynamic component of an open and competitive market economy. Dynamic competition is promoted by IPRs, since undertakings are encouraged to invest in developing new or improved products and processes. Competition is the main factor that creates conditions of pressure on undertakings to innovate. This is the reason why, both IPRs and competition are important for promoting innovation and ensuring a competitive exploitation thereof.

For the assessment of license agreements under Article 101 TFEU it must be kept in mind that the creation of IPRs often requires substantial investment, and that all rarely constitutes a risky effort with serious sunk costs. In order not to reduce dynamic competition and to maintain the incentive to innovate, the innovator must not be improperly restricted regarding the exploitation of IPRs that turn out to be valuable. For the abovementioned reasons the innovator ought to be free to seek appropriate financial remuneration for successful projects which is sufficient to maintain investment incentives, taking also failed projects into account. Furthermore, technology rights licensing may require the licensee to make significant sunk costs in the licensed technology and production assets necessary to exploit it. Sunk costs mean that in case that the licensee leaves that particular field of activity, the investment cannot be used by the licensee for other activities or sold other than at a significant loss. Article 101 TFEU cannot be applied without taking into account such *ex-ante* investments made by the parties and the risks relating to it. The risk that the parties face and the sunk cost that ought to be committed may thus lead to the agreement falling outside the scope of Article 101 para 1 TFEU or fulfilling the conditions of Article 101 para 3 TFEU, as the case may be, for the period of time required to recover the investment.

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<sup>44</sup>At this point, a necessary clarification ought to be made: in US antitrust law, monopolization constitutes an offense. On the contrary, under EU competition law, monopolization does not constitute an offense. ‘The plain language of Article [102 TFEU] makes it clear that it only prohibits abuses of a dominant position. Thus, Article [102 TFEU] does not condemn conduct aimed at acquiring market power and leading to the creation of a dominant position, even if such conduct is successful.’ See Geradin Damien, ‘Pricing Abuses by Essential Patent Holders in a Standard-Setting Context: A View from Europe’ (2009–2010) 76 Antitrust LJ 329, 346.

<sup>45</sup>See for instance Joined Cases 56/64 and 58/64 *Consten and Grundig* [1966] ECR 429.

<sup>46</sup>Application of Article 101 TFEU to TTA, para 7.

According to the Commission Notice Guidelines on the Application of Article 101 TFEU to technology transfer agreements,<sup>47</sup> in assessing licensing agreements under Article 101 TFEU, ‘the existing analytical framework is sufficiently flexible to take due account of the dynamic aspects of technology rights licensing’. A presumption that IPRs and license agreements as such give rise to competition concerns simply does not exist. More specifically, ‘most license agreements do not restrict competition and create pro-competitive efficiencies’.<sup>48</sup> The truth is that licensing as such is pro-competitive, because it leads to dissemination of technology and promotes innovation by the licensor and the licensee(s). Furthermore, license agreements that restrict competition may often give rise to pro-competitive efficiencies, which must be assessed under Article 101 para 3 TFEU and balanced against the negative effects on competition.<sup>49</sup> This is the reason why the great majority of license agreements are compatible with Article 101 TFEU.

## ***2.4 The Necessity of Considering the Guidance in Applying Article [102 TFEU] to Abusive Exclusionary Conduct by Dominant Undertakings<sup>50</sup>***

Both the above-mentioned Guidelines (about Horizontal Cooperation and Technology Transfer) ought to be read and analysed together with the content of the Guidance in Applying Article [102 TFEU] to Abusive Exclusionary Conduct by Dominant Undertakings. According to this last Guidance about abuse of dominance, the (basic) aim of the Commission’s enforcement activity is to ensure that dominant undertakings do not impair effective competition by foreclosing their competitors in an anticompetitive way.

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<sup>47</sup>ibid, para 9.

<sup>48</sup>ibid.

<sup>49</sup>Commission Guidelines on the Application of Article 81(3) of the Treaty, OJ C 101, 27 April 2004, 97. See also Geradin (n 1), quoting the following:

When asked to examine a restrictive agreement or a merger, the test to be performed by competition authorities essentially amounts to determining whether the negative effects of the agreement/transaction on competition is more than compensated by ‘efficiencies’ taking the form of the production of new and/or better products, the realization of economies of scale or scope etc. Such a balancing test will not necessarily be easy as parties to a proceeding will generally try to inflate the ‘negative’ or ‘positive’ effects of the agreement/merger in question.

<sup>50</sup>Abusive Exclusionary Conduct (n 12), 7–20.

However, according to the Guidance in Applying Article [102 TFEU] to Abusive Exclusionary Conduct by Dominant Undertakings, para 7:

conduct which is directly exploitative of consumers, for example charging excessively high prices or including certain behavior that undermines the efforts to achieve an integrated internal market, is also liable to infringe Article [102 TFEU]. The Commission may decide to intervene in relation to such conduct, where the protection of consumers and the proper functioning of the internal market cannot otherwise be adequately ensured.

### 3 The Dynamic Relationship Between Antitrust Law and Intellectual Property Law<sup>51</sup>

#### 3.1 *The US and EU Convergence Regarding the Exercise of SEPs*

The above-mentioned provisions show that the relationship between antitrust and IP law is ‘law in the making’, which means that it is not something static; on the contrary it is about something dynamic. In the Information and Communications Technologies (ICT) industry, the exercise of SEPs constitutes the area where the most recent developments are observed.

Furthermore, it ought to be underlined that US and EU authorities finally have reached similar positions on the main principles governing the solution to questions raised by the exercise of SEPs, despite the fact they started from different legal positions.<sup>52</sup> The truth is that several issues remain open. Courts and competition regulators from both sides of the Atlantic have already set out guidance to the patent holders and potential licensees with such a level of clarity that should enable them to reach agreed solutions and further reduce the risks of patent hold-up or patent hold-out. In EU, the principles have been set out by courts (i.e. settled or established case law). Further, (self-binding) guidelines laid by competition regulators/

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<sup>51</sup>See relatively Jean-Yves Art, ‘Competition and Intellectual Property: Friends or Foes—The Case of SEPs’ in Raffaelli (ed), *Antitrust Between EU Law and National Law* (Brussels/Milan 2015) 190.

<sup>52</sup>ibid.

watchdogs,<sup>53</sup> has enabled both patent holders and potential licensees to achieve workable solutions and further reduce the above-mentioned risks.<sup>54</sup>

### **3.2 *The Commission's Practice: The Motorola and Samsung Decisions as Basic Examples***

Regarding SEPs, in 2014 the Commission adopted two decisions. The *Motorola*<sup>55</sup> and *Samsung*<sup>56</sup> decisions outlined that there should be some limits to SEP rights precisely because of the competition context in which the standardization process takes place. The Commission was able to act not only quickly but also effectively in both cases on a general issue which had broader market relevance.<sup>57</sup>

Regarding *Samsung*, the Commission accepted binding commitments that Samsung will not seek injunctions<sup>58</sup> against Apple in relation to SEPs where certain

<sup>53</sup>At this point, it must be clarified that the courts decisions constitute the so-called case law. The EC's decisions do not constitute case law; they constitute the Commission's practice. The guidelines constitute the so-called soft law. However, the guidelines suffer from the disadvantage of being nonbinding 'and the EU institutions may change their minds on particular issues or some issues may arise for the first time with all the attendant uncertainty'. See indicatively Vincent JG Power, 'European Union State Aid Law and Ports, in Philip Wareham (ed) *Competition Law and Shipping: The EMLO Guide to EU Competition Law in the Shipping and Port Industries* (CMP Publishing 2010) 269.

<sup>54</sup>As Niels Ersboll, 'Information exchange between Competitors' in Philip Wareham (ed) *Competition Law and Shipping: The EMLO Guide to EU Competition Law in the Shipping and Port Industries* (CMP Publishing 2010) 67:

EU Competition Law on information exchange between competitors has been developed through the case law of the European Courts and the European Commission decisional practice. However, the case law is sporadic and the judgements and decisions are often highly case specific, which makes them difficult to apply across the board.

<sup>55</sup>Case AT.39985 *Motorola—Enforcement of GPRS SEPs*, paras 311, 322, 377, 415–420.

<sup>56</sup>Case AT.39939 *Samsung Electronics—Enforcement of UMTS SEPs* (2014) OJ C 350/8, para 62.

<sup>57</sup>Jorg Witting and Peter Willis, 'European Commission closes Samsung and Motorola cases on alleged abuse of standard essential patents' (*Bird & Bird*, 7 May 2014) <<https://www.twobirds.com/en/news/articles/2014/global/commission-closes-samsung-and-motorola-cases-on-alleged-abuse-of-standard-essential-patents>> accessed 25 October 2017.

<sup>58</sup>European Commission 'Antitrust Decisions on SEPs (SEPs)—Motorola Mobility and Samsung Electronics—Frequently Asked Questions' (MEMO 29 April 2014), states that:

An injunction is a court order aimed at preventing the continuation of a patent infringement. Generally, it includes the prohibition to sell the product infringing the patent. Such injunctions can be preliminary—as a precautionary measure typically for the time of the assessment of the case on the merits by the court. Injunctions can also be permanent as a result of the decision on the merits by a court.

conditions are met. Regarding *Motorola*, the Commission found that this company had infringed Article 102 TFEU by seeking and enforcing injunctions against Apple in relation to SEPs. The Commission emphasized the importance of protecting IPRs and highlighted the exceptional nature of its intervention in these two cases, reflecting the fact that the use of technology covered by SEPs is essential for entry into certain markets.

At this point it ought to be underlined that although both the *Samsung* and *Motorola* cases concerned patents essential to mobile telecommunications standards, and the decision of the Commission in both cases has the intention of establishing more general principles, applicable to all SEPs that are crucial for the assurance of interoperability across not only the communications and IT sectors, but also more widely in sectors, like, for example, the maritime transports sector, the automotive sector<sup>59</sup> and the renewable energy, which are also characterized by innovation and standardization.

In the above-mentioned cases, the behavior of Motorola and the behavior of Samsung were considered abusive by the Commission for the following main reasons: first of all, because they could result in a temporary ban on online sales of Apple mobile products, secondly, because they could force Apple into accepting disadvantageous terms as the price of settlement, and finally because they could cause harm to the standard development process.

So, in few words, the purpose/effect of the settlement was that Apple's continued (and constant) presence in the market ought to be ensured. However, it is remarkable that the final solution that the EC decided in these two cases as preferable was the acceptance of binding commitments instead of the ascertainment of abusive exploitation of a dominant position and the imposition of a high fine to each company. Consequently, a very careful approach by the Commission is detected and endorsed, which shows that the peculiarities of the *Motorola* and *Samsung* cases were correctly recognized and considered as the crucial reason for the special treatment of both companies. After the *Motorola* and *Samsung* cases, an interesting development in European case law took place.

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<sup>59</sup>Regarding this specific sector, see Shervin Pishevar, 'Is Standardization for Autonomous Cars Around the Corner?' (*CPI*, 2017) <[https://www.competitionpolicyinternational.com/wp-content/uploads/2017/11/9652873\\_2\\_Autonomous-Auto-Standardization-shortened.pdf](https://www.competitionpolicyinternational.com/wp-content/uploads/2017/11/9652873_2_Autonomous-Auto-Standardization-shortened.pdf)>.

### **3.3 Did the European Case Law Follow the Commission's Approach?**

#### **3.3.1 Assessment of the Case *Huawei/ZTE* (C-170/2013) and Criticism<sup>60</sup>**

In the *Huawei v ZTE* ruling the Court of Justice of the European Union (CJEU) confirmed not only according to the Commission's point of view,<sup>61</sup> but also according to a significant part of theory,<sup>62</sup> the position of the Commission in the *Motorola* and *Samsung* cases on two main points. The first, that SEPs are different from other patents because of the commitments to license on FRAND terms, and the second is that in cases where there is a company willing to take a license on FRAND terms, 'injunctions should be off the table'.<sup>63</sup>

However, even if the judgement of the CJEU does partially or indirectly confirm the EC's approach to the same issues in the *Motorola* and *Samsung* cases, its approach is considered narrower,<sup>64</sup> which means that there are still unresolved issues.<sup>65</sup> Furthermore, there is a part in theory which gives the impression that it is even more severe against the Commission's approach in the *Motorola* and *Samsung* cases,<sup>66</sup> considering that even before the *Huawei/ZTE* judgement, it was doubtful whether the Commission's actions in the *Motorola* and *Samsung* cases were consistent with its own enforcement guidance (about the application of Article [102

<sup>60</sup>See indicatively, Björn Lundqvist, 'The Interface between EU Competition Law and SEPs—from Orange-Book-Standard to the *Huawei* Case' (2015) 11 ECJ 367, 368.

<sup>61</sup>See also Commissioner Vestager, 'Intellectual Property and Competition' (19th IBA Competition Conference, Florence, 11 September 2015) <[https://ec.europa.eu/competition/commissioners/2014-2019/vestager/announcements/intellectual-property-and-competition\\_en](https://ec.europa.eu/competition/commissioners/2014-2019/vestager/announcements/intellectual-property-and-competition_en)>.

<sup>62</sup>‘Huawei (indirectly) confirms the previous practice of the European Commission’. See Andreas Heinemann, ‘Standard Essential Patents in Standard Setting Organizations: Competition Law and the Realization of Licensing Commitments’ (2015) 10 JIPLP 947, 950.

<sup>63</sup>The CJEU placed remarkable emphasis ‘on the finding that actions for patent infringement are not in breach of Article 102 TFEU provided certain requirements are met’. See Heinemann (n 62) 950.

<sup>64</sup>[M]ore in line with that established in the CJEU's so-called essential facilities case law’. See Sean-Paul Brankin, Salome Cisnal de Ugarte and Lisa Kimmel, ‘Huawei: Injunctions and SEPs—Is Exclusion a Foregone Conclusion?’ (2015–2016) 30(1) Antitrust 80; See also, Peter Picht quotes in a literary way that ‘the ECJ's ‘middle path’ needs to get broader and more discernible in order not to become a slippery slope’. Peter (n 4) 375.

<sup>65</sup>See Sean-Paul Brankin, Salome Cisnal de Ugarte and Lisa Kimmel, ‘Huawei/ZTE: Towards a More Demanding Standard of Abuse in Essential Patent Cases’ (2016) 7 JECLAP 520. See also Lundqvist (n 60) 389, 391, who quotes that ‘[t]he ECJ, by drafting the procedure so narrowly, strongly encourages the parties to settle the dispute quickly’.

<sup>66</sup>See Brankin (n 64).

TFEU]). For the reasons that were analyzed above in 2.4 of this chapter,<sup>67</sup> this approach may be considered as undue; the self-binding Guidance of the Commission in Applying Article [102 TFEU] to Abusive Exclusionary Conduct by Dominant Undertakings cannot be interpreted in such a narrow sense, according to which, the intervention of the Commission would be excused only in cases of anticompetitive foreclosure of competitors. In such a scenario, excessive pricing cases, for instance, would be excluded from the Commission's abuse of dominance 'radar'.<sup>68</sup>

More specifically, according to para 42 of the *Huawei v ZTE* judgement: '[t]he court must strike a balance between maintaining free competition [...] and the requirement to safeguard that proprietor's IPRs and its right to effective judicial protection'. The court should strike not just a balance, but also *the right balance*. So, the honest effort made to establish a fair balance between patent law and competition law is demonstrated by the CJEU in the *Huawei v ZTE* case.<sup>69</sup>

Perhaps, there is some doubt about the CJEU's intent with regard to the higher foreclosure standard in *Magill* and the so-called essential facilities cases that followed on from *Magill* by the statement earlier in the CJEU's judgement that 'it

<sup>67</sup>See Abusive Exclusionary Conduct (n 12), para 7.

<sup>68</sup>Regarding this issue, see 'The Right Price for Intellectual Property Rights: The Debate Continues' (*Oxera*, October 2017). See also the Case C-177/16 AKKA/LAA v Konkurencies padome ECLI:EU:C:2017: 689. In this case the CEU (ex ECJ) concluded—amongst others—the following:

1. Trade between Member States is capable of being affected by the level of rates set by a copyright management organisation that holds a monopoly and also manages the rights of foreign copyright holders, with the result that Article 102 TFEU may be applicable.
2. For the purposes of examining whether a copyright management organisation applies unfair prices within the meaning of point (a) of the second paragraph of Article 102 TFEU, it is appropriate to compare its rates with those applicable in neighbouring Member States as well as with those applicable in other Member States adjusted in accordance with the PPP index, provided that the reference Member States have been selected in accordance with objective, appropriate and verifiable criteria and that the comparisons are made on a consistent basis. It is permissible to compare the rates charged in one or several specific user segments if there are indications that the excessive nature of the fees affects those segments.
3. The difference between the rates compared must be regarded as appreciable if that difference is significant and persistent. Such a difference is indicative of abuse of a dominant position and it is for the copyright management organisation holding a dominant position to show that its prices are fair by reference to objective factors that have an impact on management expenses or the remuneration of right holders.

<sup>69</sup>Paras 42, 52, 53 and 73 are considered as crucial paragraphs of the decision *Huawei v ZTE*. However, according to Brankin and others para 73 is a key paragraph. It should be mentioned that in this paragraph the CJEU expressly adopted a narrower, and exclusionary, analysis of abuse. Brankin (n 64), para 73.

must be pointed out, as the Advocate General has observed in point 70 of his Opinion, that the particular circumstances of the case in the main proceedings distinguish that case from [the *Magill* case law].<sup>70</sup> Nevertheless, the CJEU had no real intention of distinguishing these cases completely. In para 70 of his Opinion, to which the CJEU refers, AG Wathelet expressly stated that the *Magill* case law remains ‘partially relevant’. In this context, it must be acceptable that, as in the refusal to supply cases, SEP cases involve—as the CJEU specifically recognized—a delicate balancing of competing rights and interests. As Andreas Heinemann pointed out correctly in his final remarks,

[t]he Huawei judgement of the CJEU provides new guidance for the relationship between intellectual property law and competition law. It clarifies that a solution conducive to innovation cannot be achieved by protecting intellectual property rights against competition law, but, rather, only by embracing the complementary nature of both areas of law.<sup>71</sup>

### **3.3.2 Results and Consequences of the CJEU’s Decision in *Huawei/ZTE* Case**

The success story of the *Huawei v ZTE* judgement is constituted on successfully balancing the bargaining powers between owners of so-called ‘SEP owners’ and producers of smart phones and other telecommunications devices relying upon these patents. As Torsten Körber quoted:

[t]he ECJ’s judgement in *Huawei v ZTE* marked the outcome of an important battle in the so-called ‘patent wars’ between the makers of smart phones and other telecommunications equipment. In its judgement, the ECJ balanced the bargaining powers between owners of so-called ‘standard essential patents’ (‘SEP owners’) and makers of smart phones and other telecommunications devices relying upon these patents (‘makers’).<sup>72</sup>

The truth is that the CJEU in its *Huawei v ZTE* was extremely prudent and made very careful steps. However, the potential consequence of the ECJ’s judgement in *Huawei v ZTE* is that in the future, SEP owners who bring abusive actions against good faith licensees cannot count on a lack of severity because the European Court of

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<sup>70</sup>Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp.* EU:C:2015:477, para 48.

<sup>71</sup>Heinemann (n 62) 952.

<sup>72</sup>Torsten Körber, ‘Abuse of a Dominant Position by Legal Actions of Owners of Standard essential Patents: *Huawei Technologies Co. Ltd v ZTE Corp.*’ (2016) 53 CML Rev. 1107.

Justice (ECJ) has already clarified the SEP owners' obligations under Article 102 TFEU in this specific judgement of preliminary ruling, according to Article 267 TFEU. In any case, the CJEU decision in the *Huawei v ZTE* case constitutes a 'road-map' for FRAND cases.<sup>73</sup>

### 3.3.3 Unanswered Questions

The CJEU did not answer the question whether SEP owners enjoy a dominant position *per se*, despite the fact that the Advocate General (Melchior Wathelet) had questioned a *per se* assumption.<sup>74</sup> Nevertheless, according to a rebuttable presumption, in practice SEP owners are almost always dominant.

The CJEU based the licensing obligation of the SEP owner (as well as the compulsory licensing defense of the alleged infringer) on both Article 102 TFEU and the FRAND commitment. This leaves room for the question whether the *Huawei v ZTE* decision also applies to cases in which the SEP owner is not bound by a FRAND commitment (for example, in the case that the SEP owner has acquired the SEP from the original owner without submitting to the FRAND commitment). It is doubtful whether the answer to this question could be affirmative.<sup>75</sup> Perhaps, this will be one of the issues that the forthcoming Guidelines prepared by the EC are going to clarify.<sup>76</sup>

The CJEU distinguished the facts of the *Huawei v ZTE* case (a SEP situation) from those of the German *Orange Book-Standard* case (non-SEP situation). So, a crucial question is whether the test applied in *Huawei v ZTE* case can still be applied to non-SEP cases. Making use of the teachings of a *de facto* standard (like in the German case) can be as indispensable for market access as making use of a SEP (like in the *Huawei v ZTE* case). If the requirements of the *Magill* decision<sup>77</sup>

<sup>73</sup>Heinemann (n 62).

<sup>74</sup>Advocate General's Opinion in *Huawei Technologies* (n 70), paras 57–58.

<sup>75</sup>According to Hanns Ullrich 'FRAND terms are not a single, uniform set, but a framework providing for a range'. Hanns Ullrich 'FRAND Access to Open Standards and the Patent Exclusivity: Restating the Principles' (Concurrences No. 2, 2017) para 44.

<sup>76</sup>See the last part of this chapter.

<sup>77</sup>Joined Cases C-241/91 P & C-242/91 P *Radio Telefis Eireann (RTE) & Independent Television Publication Ltd (ITP) v Commission* [1995] ECR I-743, [1995] 4 CMLR 718, [1995] 1 CEC 400. For instance, in the *Magill* case the ECJ stated that: 'the refusal by the owner of an exclusive right to grant a licence, even if it is an act of an undertaking holding a dominant position, cannot in itself be abuse of a dominant position'. Nevertheless, the ECJ pointed out that 'the exercise of an exclusive right by the proprietor may, in exceptional circumstances, involve abusive conduct'. Such exceptional circumstances may occur where the refusal to license cannot be objectively justified and would eliminate all competition in a downstream market for a new product not offered by the owner of the IPR for which there is customer demand. See George Karydis and Nikolaos Zevgolis, 'Regulation 1400/2002 and Access to Technical Information: Necessity of Convergent Interpretation With the Principles Established by the Relevant Case Law' 2009) 30 ECLR 95, 100,

are fulfilled, the owner of an indispensable IPR (either it is a SEP or a non-essential patent) is under a licensing obligation due to Article 102 TFEU. Hence, in principle, the same rules (i.e. the *Huawei v ZTE* test) could be applied.

The CJEU did not clarify the meaning of ‘FRAND’. The court left this task to the parties which may request the help of a court or an arbitration panel. This appears to be correct in principle, because general rules regarding the very diverse and dynamic telecommunications sector, for example, is not realistic to find.<sup>78</sup> This is the reason why the author’s hope is that this issue will *not* be one of the issues that the forthcoming Guidelines prepared by the EC are going to clarify.<sup>79</sup>

It ought to be mentioned that some lower German patent courts seem to somehow ignore the CJEU’s *Huawei v ZTE* decision; these courts still seem to be somewhat reluctant to rethink their traditional lines of reasoning (which are IPR-holder friendly).<sup>80</sup> Nevertheless, according to Regulation 1/2003, the national courts are bound by the ECJ’s interpretation of Article 102 TFEU (and Article 101 TFEU).

## 4 Conclusion: The Forthcoming Guidance—Should We Expect Undesirable Surprises?

Everybody who is involved in the issue about the interaction between IP Law and Competition Law accepts that consumers must gain access to a wide range of innovative and creative goods and services at reasonable prices. The relevant—and mainly the recent—case law, seems that it satisfies the need for predictability. In any case, the undisputable truth is that competition policy and IP policy ought to ‘work hand in glove in order to promote economic growth’.<sup>81</sup>

Due to the *Huawei v ZTE* judgement, the successful effort made by the CJEU to establish a fair balance between patent law and competition law is demonstrated with emphasis. It is characteristic and indicative that in Japan, for example, the specific judgement was used in order to create relevant Guidelines.<sup>82</sup> However, in

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quoting that ‘[...] it should be underlined that, according to the ECJ’s judgement in its *Magill* decision (para 34), as regards the application of Article 82 in the case of a refusal to deal, intellectual property rights ought to be treated in a different way from other property rights’.

<sup>78</sup>Art (n 51) 185.

<sup>79</sup>See the last part of this chapter.

<sup>80</sup>Korber (n 72) 1110.

<sup>81</sup>Commissioner Vestager, ‘Intellectual Property and Competition’ (19th IBA Competition Conference, Florence, 11 September 2015).

<sup>82</sup>Toshiaki Takigawa, ‘Antitrust Perspectives from Japan’ (2nd International Conference on Standardization, Patents and Competition Issues: Perspectives from Asia Pacific region and Europe, New Delhi, 10 and 11 June 2017).

April 2017, the Commission indicated it might publish a formal policy document in order to clarify the rules on patent ownership and licensing. Any guidance by the Commission ought to build on the *Huawei v ZTE* judgement and must not undermine it.

According to unconfirmed information, an EU ‘guidance’ document on how companies can manage the licensing of technology to connect devices to the internet was expected before the end of 2017. It would be about a document that would try to balance the interests of companies that license patents (for example, Ericsson, Nokia and Qualcomm) with those that use the patents to create Internet-connected products. ‘There have been ongoing debates on all different kind of levels on how to strike a balance between providers and implementers, to ensure that all sides feel there is a level playing field where certain basic rules are shared’.<sup>83</sup> However, the publication of the Commission’s Notice (or Guidelines?) has already been delayed for several reasons because there were different views in the Commission itself, i.e. between the internal divisions involved. Furthermore, there was a significant interest and reaction from the industry, which was concerned that its point of view was not sufficiently considered. Opposing interests are present in the case examined: the undisputable truth is that patent owners are seeking to continue the current licensing model, ‘which allows them to license to the ‘end user,’ such as smartphone makers’.<sup>84</sup> On the other hand, device manufacturers have the intention of accessing 5G technology through components set inside their products, without being obliged to license the technology. One of the Commission’s main concerns is that the next generation of technology ought to be available also for small and medium-sized enterprises (SMEs). This is the challenge that the Commission faces: the diffusion of technology should really take place throughout the value chain. For now, unfortunately it seems that SMEs are not able to really find their way, without the Commission’s help. However, in general, the European policy about the SMEs is considered quite protective. Therefore, in combination with the ‘rulings’ by the ECJ in its *Huawei v ZTE* judgement and also several competition cases involving SEPs, it is considered that ‘a certain ‘holistic’ vision’, constitutes a desideratum in the debate in process over licensing.<sup>85</sup> The good news is that the waters are not uncharted, the already existing case law combined with the relevant soft law and practice created by the EC simply confirms this point.

**Acknowledgements** Many thanks to Danielle Apostolatos for her comments. This paper is dedicated to the memory of my uncle and my daughter’s godfather, Totomis Protonotarios (1956–2016).

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<sup>83</sup>See Matthew Newman, ‘EU IP Document Will Balance Interests of Tech Companies With Those of License Holders’ (*Mlex Market Insight*, 25 September 2017).

<sup>84</sup>*ibid.*

<sup>85</sup>Antti Peltomäki stated that ‘*If we are able to tie the knots, and if we are able to give a certain kind of map and tools for you to play, then we’ve done our job*’. Antti Peltomäki, ‘Keynote Address’ (LeadershIP EU, Brussels, 25 September 2017).

**Disclosure** All views and legal opinions expressed in this paper are strictly personal and do not reflect the point of view of the Hellenic Competition Commission.

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# **Chapter 3**

# **The Relevance of Standardization in a Future Competitive India and the Role of Policy Makers, Antitrust Authorities and Courts to Promote it**



**Sheetal Chopra, Matteo Sabattini and Dina Kallay**

## **1 Introduction**

Knowledge driven economies have understood the importance of Intellectual Property (IP) and its role towards inclusive development of nations. Worldwide, countries continue to evolve their Intellectual Property Right (IPR) laws to best suit their country's socio-economic needs. The common theme in this evolutionary process is implementation of measures that can promote commercialization of IP. It is understood that globally less than 5% of patents are commercialized. Reasons for such low commercialization rate can stem from any of the following: patents were strategically filed for defensive purposes, the right holders do not have sufficient wherewithal to have their patents commercialized, or sectoral constraints exist.<sup>1</sup>

The Information and Communications Technology (ICT) sector offers numerous examples of voluntary, industry-led efforts that have addressed the issue of commercialization. One notable example is represented by patented standardized technologies, where standard essential patents (SEPs) are made 'available and accessible' through licensing on fair, reasonable, and non-discriminatory (FRAND) terms and conditions. FRAND commitment ensures that the patented technologies are not 'held up', i.e. industry players are not blocked out of the market, and

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<sup>1</sup>Ted Sichelman and Stuart JH Graham, 'Patenting by Entrepreneurs: An Empirical Study' (2010) 17 (1) Mich. Telecomm. Tech. L. Rev. 111.

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adoption is guaranteed and encouraged. The benefits to consumers that the ICT industry has achieved in recent years and the emergence of the ‘networked society’ are testaments to the efficiencies and enormous consumer welfare created by the FRAND licensing regime. Due to FRAND the ICT industry has witnessed, among other efficiencies, increased competition, availability of products at falling, competitive prices, removal of market entry barriers and induced direct and indirect network effects.<sup>2</sup> Almost eight billion subscription base globally (equivalent to world’s population) and over 400 mobile phone manufacturers worldwide testify the efficacy and dynamism of the FRAND licensing model, that thus deserves a ‘hand of blessing’ and not an ‘eye of suspicion’.<sup>3</sup>

As recognized by antitrust authorities, technology providers who have voluntarily diluted exclusionary rights related to their SEPs deserve in exchange a fair Return on Investment (ROI).<sup>4</sup> The ROI from patent licensing serves as one of the drivers in technological developments, especially in the ICT sector. Indeed, connecting millions of devices by different vendors with each other and making them work properly together (i.e. allowing for interoperability) can only be achieved when there are sustained efforts made in R&D and continued investments by the broadest base of technology developers and business models.

Despite guaranteeing highly competitive markets and other societal benefits and progress, licensing models based on FRAND are often looked upon with suspicion by some industry members, policy makers, courts and sometimes even consumers. Indeed, over the past few years, a number of competition agencies have shown a keen interest in SEPs. While much of the interest has taken the form of antitrust advocacy, rather than enforcement cases, questionable anticompetitive effects of this focus are beginning to emerge. These include—encouraging patent infringement in violation of the World Trade Organisation’s (WTO) Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement principles; tilting the playing field against market players who do not infringe; and eroding procompetitive standardization to the detriment of consumers.

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<sup>2</sup>Boston Consulting Group (BCG), ‘Mobile Technologies Create Trillion Dollar Impact’ (15 January 2015) <<https://www.bcg.com/d/press/15jan2015-mobile-revolution-technologies-trillion-dollar-impact-835>>.

<sup>3</sup>See data on subscriptions, mobile networks traffic and forecast. ‘Ericsson Mobility Report’ (November 2017) 4 <<https://www.ericsson.com/assets/local/mobile-report/documents/2017/ericsson-mobility-report-november-2017.pdf>>.

<sup>4</sup>The European Commission advocates in favor of ‘efficient and globally acceptable licensing approach, which ensures a fair return on investment for standard essential patent (SEPs) holders’; See, Commission, ‘ICT Standardization Priorities for the Digital Single Market’ COM(2016) 176 final; Also the Standard Development Organization ETSI recognizes that SEP holder should be ‘fairly and adequately rewarded’; ETSI, ‘Essential IPRs in ETSI’ (2018) <<http://www.etsi.org/about/how-we-work/intellectual-property-rights-iprs>>.

This chapter will explore the motivations and strategies of certain stakeholders to devalue FRAND assured essential patents. It will also address the challenges that the ICT industry is currently facing in the background of past scepticisms from antitrust agencies and courts. Finally, the chapter will recommend policy makers to avoid tilting the fragile balance between technology providers and technology implementers which is achieved through FRAND licensing. An imbalance of interests could, otherwise, potentially affect the innovation cycle, reduce investments in R&D, and favor proprietary solutions as opposed to interoperable, standardized options.

## 2 Mobile Communications

Mobile phones have become part of our day to day life and, for some people, they are now an indispensable product. To create our smartphones has been a burdensome exercise. A brick-sized phone was developed three decades ago.<sup>5</sup> Back in the early 1980s, it took more than a decade to get a wireline connection in India and still a phone could not connect globally. Today, cellular technology connects seven billion<sup>6</sup> people, equivalent to the world's population.

Technological revolution across various generations of cellular technology (1G, 2G, 3G, 4G) in terms of speed and performance has tremendously empowered every sector of society. Standardization has enabled telecom capacities, aesthetics, and solved problems such as roaming, network efficiency, voice quality, speeds, performance, data delivery along with voice communication etc. While 1G and 2G standards focused more on enhancing voice quality (voice calls) and messaging, 3G and 4G standards focused more on data rates and video streaming (data calls). Thanks to 3G or 4G networks data speeds were significantly increased. In fact, mobile data transmission speed over 4G is 12,000 times faster<sup>7</sup> than with 2G networks, thus enabling streaming of a 90 mins video in just 90 secs over 4G, as against 72 hrs over 2G. Enhanced disruptive competition in the market has further acted as highly profitable to consumers with some operators having slashed the data rates by more than 60%.<sup>8</sup>

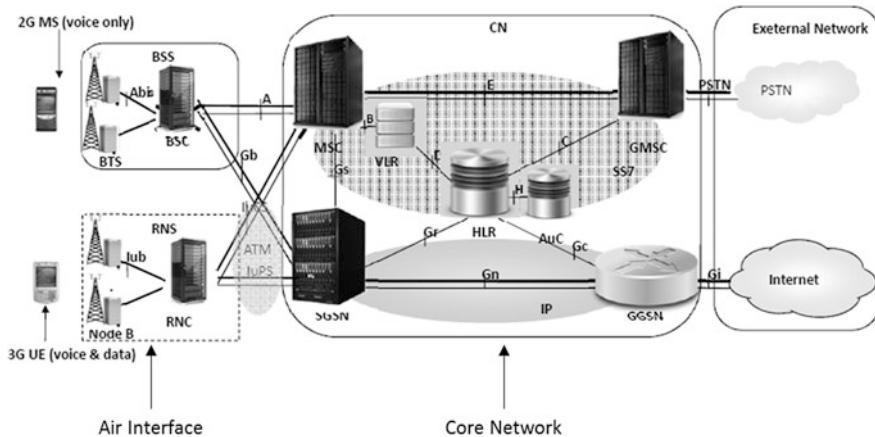
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<sup>5</sup>Justus Baron, Kirti Gupta and Brandon Roberts, 'Unpacking 3GPP Standards' (Searle Centre, March 2015) <[https://www.law.northwestern.edu/researchfaculty/searlecenter/innovationeconomics/documents/Baron\\_Gupta\\_Unpacking\\_3gpp\\_Standards.pdf](https://www.law.northwestern.edu/researchfaculty/searlecenter/innovationeconomics/documents/Baron_Gupta_Unpacking_3gpp_Standards.pdf)>.

<sup>6</sup>'Global Mobile Subscriber Surpass 7 Billion' (*TeleGeography*, 28 July 2015) <<https://www.telegeography.com/press/press-releases/2015/07/28/global-mobile-subscribers-surpass-7-billion/index.html>> accessed 24 August 2017.

<sup>7</sup>BCG (n 2).

<sup>8</sup>Kalyan Parbat, 'Reliance Jio's aggressive rates to shake up industry: Experts' *Economic Times* (5 September 2016) <[http://economictimes.indiatimes.com/articleshow/54009228.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://economictimes.indiatimes.com/articleshow/54009228.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)> accessed 24 August 2017.



**Fig. 1** Cellular network (2G and 3G), Nanocell. (NanoCell Networks Pvt Ltd is an organization with focus on delivering telecom training solutions)

## 2.1 Complex Telecom System: Air-Interface and Backhaul

We all, as consumers, can use our mobile phones with great convenience. To make this happen, however, there is a complex mesh of networks in the background (also termed as ‘backhaul’), that is set up to take care of varying consumer’s needs.

The figure below offers a glimpse of the variety of components involved to complete a connection that is almost real time (Fig. 1).

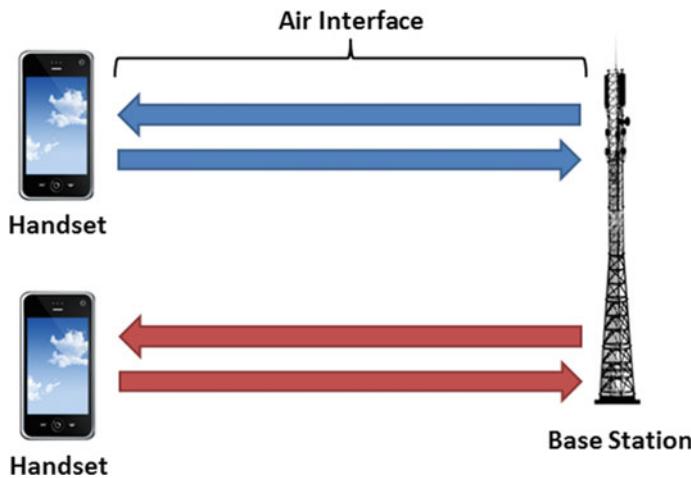
The figure above offers some insight into how a voice or a data call (Call) is routed following complex procedures including surpassing unlimited hurdles that fall in the journey of a call such as physical constraints like trees, buildings, thick walls, basements etc.

a. **An air-interface:** An air-interface refers to establishing a connection between a mobile phone and the Cell Tower (BTS-A base station, that receives and transmits signals),<sup>9</sup> as shown in below figure where the communication happens over the air (Fig. 2).

This refers to a communication over the air between the handset and the tower (radio access) with the help of radio waves. Allocation of the spectrum (relevant frequency bands) is essential to make this air-interface successful.<sup>10</sup> This radio interface must be fully defined so that there is compatibility between mobile

<sup>9</sup>Definition: ‘Base Station’ (Techtarget) <<http://whatis.techtarget.com/definition/base-station>> accessed 24 August 2017.

<sup>10</sup>As the EC explains ‘[r]adio spectrum is the basis for wireless communications like Wi-Fi or mobile phones, but is also key to areas like transport, broadcasting, public safety, research, environmental protection, and energy’; See European Commission, ‘What is Radio Spectrum Policy?’ <<https://ec.europa.eu/digital-single-market/en/what-radio-spectrum-policy>>.



**Fig. 2** An air interface

stations and networks. Complex technologies are involved to ensure that networks and handsets from different manufacturers interact with each other in an efficient manner.

- b. **Backhaul (Core Network):** A backhaul<sup>11</sup> generally refers to the entire set of multistep processes that is followed to ensure that a call (voice or data<sup>12</sup>) becomes successful. Once the base station receives signals (voice or data calling) from a user, it transmits this data in packets to core network (also known as backhaul) mostly through wired networks<sup>13</sup> such as ethernets/cables. Once the base station tower sends signals to core networks, it then authenticates the user, passes billing information, data to be transmitted (voice or information), checks what network resources should be allocated to a user such as bandwidth, call routing to a destination etc.

In the backhaul, there are multiple equipments that render important functions, few of those include HLR (Home Location Register), VLR (Visitor Location Register), EIR (Equipment Identity Register), Authentication Centre, GMSC

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<sup>11</sup>Backhaul Basics, A Definition Network Experts Define Backhaul Networks' (*RCR Wireless News*, 13 May 2014) <<https://www.rcrwireless.com/20140513/network-infrastructure/backhaul-network-definitions-cellular-backhaul-definition>> accessed 24 August 2017.

<sup>12</sup>Data calling includes videos, web browsing, information access etc.

<sup>13</sup>However, maintaining extensive wired network is impossible due to several constraints (processing delays due to multiple relays, environmental challenges such as faced in maintaining sub-marine cables etc.).

(Gateway Mobile Switching Centre), GGSN<sup>14</sup> (Gateway General Packet Radio Service (GPRS)) Support Node, which is like a ‘gatekeeper’ that interconnects between GPRS system and internet), SGSN<sup>15</sup> (Serving GPRS Support Node which authenticates user for voice traffic for GPRS (2G) mobiles) etc.

Few important things that are required for call (data and/or voice) transmission include:

- **Spectrum and Radio frequencies (Broadband)**

To understand it better, consider broadband is like a road/highways/railway tracks and as a vehicle (like an aircraft/car/ship/train) as different Radio frequencies.

- **Data (voice or information)**

As an analogy, consider passengers as ‘Data’ that is carried by over-allocated frequencies (car/aircraft/ship/cycle/train) in the available scarce spectrum (road/tracks/highways). Data can be a voice or information like videos/files etc.

- **Standardized technologies**

Evolution in telecommunication technologies ensures how to best utilize the existing scarce spectrum that is available in nature and is a non-renewable source. As an analogy, technological development increases capacity of a vehicle to carry more passengers. Consider a car that can carry only five passengers (i.e. ‘data’) maximum. Technology enhances the capacity of this car (by making changes in sitting arrangement, or including new seats at the back, joining seats) to now carry more than let’s say, seven passengers. Further, consider that there are many cars carrying set of passengers on road, then the technology will ensure that there is less traffic congestion by building up subways and highways etc.

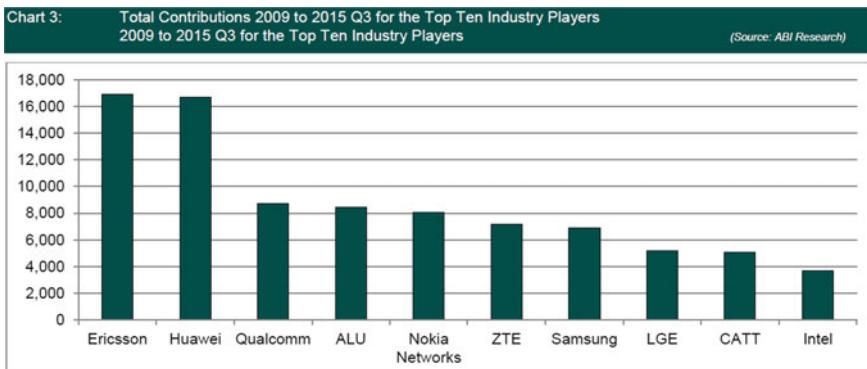
### **3 Benefits of Standardization**

Globally, only a handful of companies are the major technology contributors to cellular standards, as shown in the graph below, by contributing to the global standardization ecosystem through an open and collaborative innovation framework (Fig. 3).

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<sup>14</sup>GGSN is a router to subnetworks. GGSN plays a critical role in network protection, security, quality of service (QoS) enforcement, and interaction with charging and billing systems. ‘Cisco GGSN Gateway GPRS Support Node: Connectivity for the UMTS/HSPA Packet Core’ (*Cisco*, 25 June 2010) <[https://www.cisco.com/c/en/us/products/collateral/wireless/asr-5000-series/data-sheet\\_c78-607120.html](https://www.cisco.com/c/en/us/products/collateral/wireless/asr-5000-series/data-sheet_c78-607120.html)> accessed 13 November 2017.

<sup>15</sup>It is the service access point for GPRS network and authenticates user for voice data for GPRS mobiles. Once authentication is complete, SGSN registers mobile on GPRS network, ‘SGSN’ (*Telecom ABC*) <<http://www.telecomabc.com/s/sgsn.html>> accessed 13 November 2017.



**Fig. 3** Total contributions for the top ten industry players (Source All research)

Technology providers voluntarily decide to make standardized patented technologies available and accessible to everyone at FRAND terms and conditions subject to balanced and harmonized IPR policies of Standard Development Organizations (SDOs). Thanks to standardization the telecommunication sector has enabled turn-over of three trillion USD and generated 11 million jobs.<sup>16</sup> At a global scale, standardization has also enabled development of over 2.2 million mobile applications<sup>17</sup>; the total number of phone calls made per day is over 10 billion (2013 data)<sup>18</sup>; number of text messages sent per day is 18.7 billion (2014 data)<sup>19</sup>; data generated per day is 2.5 exabytes or 2.5 quintillion bytes (2016 data)<sup>20</sup> and

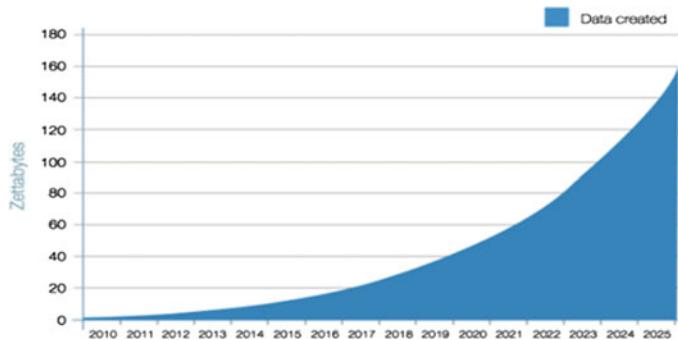
<sup>16</sup>Julio Bezerra and others, ‘The Mobile Revolution and How Mobile Technologies Derive Trillion-Dollar Economy’ (BCG, 15 January 2015) <[https://www.bcgperspectives.com/content/articles/telecommunications\\_technology\\_business\\_transformation\\_mobile\\_revolution/](https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/)>.

<sup>17</sup>‘Number of apps available in leading app stores as of March 2017’ (Statista) <<https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>>.

<sup>18</sup>Roberto Romano, ‘3 Billion Phone Calls Made in US Every Day’ (*Texas Insider*, 18 June 2013) <<http://www.texassinsider.org/3-billion-phone-calls-made-in-us-every-day/>>.

<sup>19</sup>Kenneth Burke, ‘How Many Texts Do People Send Every Day?’ (*Text Request*, 18 May 2016) <<https://www.textrequest.com/blog/many-texts-people-send-per-day/>>.

<sup>20</sup>Mikal Khoso, ‘How Much Data is Produced Every Day?’ (*Level: Northeastern University New Ventures*, 13 May 2016) <<http://www.northeastern.edu/levelblog/2016/05/13/how-much-data-produced-every-day/>>; ‘How Much Data Does The World Generate Every Minute?’ (*IFLSCIENCE*, 2017) <<http://www.iflscience.com/technology/how-much-data-does-the-world-generate-every-minute/>>.



**Fig. 4** Forecasted data created per year. (David Reinsel, John Gantz and John Rydning, ‘Data Age 2025: The Evolution of Data to Life-Critical Don’t Focus on Big Data; Focus on the Data That’s Big’ (IDC White Paper, 2017) <<https://www.seagate.com/www-content/our-story/trends/files/Seagate-WP-DataAge2025-March-2017.pdf>>)

e-commerce revenue generates 1.2 million dollars every 30 secs (2015 data).<sup>21</sup> It is expected that close to 160 zeta bytes of data will be generated by 2025 (Fig. 4).<sup>22</sup>

While global standardization and FRAND licensing have been recognized as the reason for this development, unwilling licensees continue to disturb the global standardization framework by indulging in delaying tactics.<sup>23</sup> Such unwilling licensees also gain a competitive advantage over those licensees that are diligently signing up FRAND licensing agreements.

#### 4 Good Faith Negotiations v Hold-out Behavior: Recent Case-Law

Standards allow for open collaborative innovation framework, technology sharing by licensing and increased competition in the market, leading to, high performance interoperable devices, at competitive prices. Thus standards are key to inclusive development for any nation. An efficient and balanced IP regime ensures that innovation cycle and long-term public interest are safeguarded. Thus, worldwide judiciaries and policy makers aim to strike a balance between the need to compensate IP owners on the one hand, and to successfully implement standards on the other.

<sup>21</sup>‘E-commerce Generates \$1.2 million Revenue Every 30 secs: Study’ (*Gadget News*, 19 August 2015) <<http://www.gadgetsnow.com/tech-news/E-commerce-generates-1-2-million-revenue-every-30-secondsStudy/articleshow/48543392.cms>>.

<sup>22</sup>‘Total WW Data to Reach 163ZB by 2025: Ten Times More Than Today’ (*Storage Newsletter*, March 2017) <<https://www.storagenewsletter.com/2017/04/05/total-ww-data-to-reach-163-zettabytes-by-2025-idc/>>.

<sup>23</sup>Ankit Tyagi and Sheetal Chopra, ‘Standard Essential Patents (SEP’s)—Issues and Challenges in Developing Economies’ (2017) 22 JIPR 121–135.

FRAND is to be determined by the parties in bilateral negotiations. This allows the parties to address the specific circumstance of each individual case. However, when parties cannot agree on FRAND terms, they may end up in court. While there are several aspects surrounding the licensing of SEPs, one of the most important is the need for good faith negotiations<sup>24</sup> between parties to arrive at a FRAND licensing agreement. In other words, FRAND licensing is a two-way street,<sup>25</sup> where two symmetrical risks, hold-up and hold-out must be considered. Specifically, hold-out refers to an unwilling licensee of a SEP successfully avoiding a license or forcing the SEP holder to accept royalties below FRAND rates by adopting delaying tactics, whereas hold-up refers to an SEP owner extracting royalties above FRAND under the threat of an injunction.<sup>26</sup>

Hold-out is seen by judicial and academic representatives as equally harmful as hold-up when it comes to negotiations between parties.<sup>27</sup> In *Unwired Planet v Huawei*,<sup>28</sup> the UK High Court recognized both risks and attempted in its decision to adopt an approach to obviate them. In *Apple v Motorola*,<sup>29</sup> dissenting US Federal Circuit Chief Judge Rader defined the terms hold-out v hold-up and commented that hold-out is equally as likely and as disruptive as a hold-up. The practical impact of hold-up and hold-out can, however, significantly vary.

While courts for years have too often focused on patent hold-up, the literature supporting such risk in the context of standards has mostly been theoretical.<sup>30</sup> If hold-up would exist the market would have experienced stagnant innovation, rising prices and limited market entry. However, as explained above, the data shows exactly the opposite. Moreover, in relevant markets such as India, China, Europe and US, there is no real threat of injunctions for SEPs for willing licensees. In fact,

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<sup>24</sup>ibid.

<sup>25</sup>In his post-trial opinion dated 6 August 2013, US District Court Judge Davis noted that initial offers should be viewed as a starting point in the negotiations and that FRAND licensing is a two-way street that requires good faith by both parties, *Ericsson v D-Link*, Memorandum Opinion and Order dated 6 August 2013, Case no. 6:10-CV-473; Court of Justice of the European Union has also enumerated obligations for both, SEP holders and SEP users, to obtain or avoid an injunctive relief respectively. See Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH* (2017) ECLI:EU:C:2015:477.

<sup>26</sup>Vincent Angwenyi, 'Hold-up, Hold-out and F/RAND: The Quest for Balance' (2017) 12(12) JIPLP 1012.

<sup>27</sup>Some critical academic voices warning about hold-out effects are Gregor Langus, Vilen Lipatov and Damien Neven, 'Standard Essential Patents: Who is Really Holding-up (and when)?' (2013) 9 (2) Journal of Competition Law & Economics 253–284; Anne Layne-Farrar, 'Why Patent Hold-out is Not Just a Fancy' (*Competition Policy International*, February 2016); Richard Epstein and KB Noroozi, 'Why Incentives for "Patent Hold-out" Threaten to Dismantle FRAND, and Why it Matters' (2017) 32 Berkeley Technology Law Journal 1381.

<sup>28</sup>See *Unwired Planet International v Huawei Technologies* (2017) EWHC 711 (Pat).

<sup>29</sup>*Apple Inc. v Motorola Inc.* (2014) US Court of Appeals for Federal Circuit, 757 F.3d 1286 1333.

<sup>30</sup>See analysis of lack of evidence supporting hold-up at Anne Layne Farrar, 'Hold-up & Royalty Stacking: Theory & Evidence' (2014) OECD Discussion on Competition, Intellectual Property and Standard Setting.

analyzing the 20 smartphone manufacturers more active in the US from 2000–2012, Gupta and Snyder showed that no single injunction has ever been granted for patents that were determined to be a SEP.<sup>31</sup> Also a German court has pointed out that ‘it is questionable in principle how much the threat of a claim for injunctive relief can (inadmissibly) affect license agreement negotiations’ since several decisions in Europe ‘could be and can be invoked against inappropriate demands that are in breach of antitrust law’.<sup>32</sup>

The situation of hold-out is, however, very different. SEP owners, relying on a FRAND compensation in a timely manner, usually invest heavily in R&D costs *ex-ante*. Thus, the stakes are higher for SEP owners because delayed or no license agreements would mean no ROI. On the other hand, there is often no potential downside for unwilling licensees in case they indulge in hold-out, because an unfavorable court order rendered several years later may result in paying the same royalty fees that they should have otherwise paid.<sup>33</sup> Knowing this, some implementers engage in ‘hold-out’ or ‘reverse hold-up’, by deliberately choosing not to engage in a FRAND license negotiation. Typically, hold-out practices are combined with the challenge of validity and essentiality of SEPs in a court. To avoid the latter, the CJEU has indicated that these challenges must take place in parallel proceedings.

Hold-out, contrary to hold-up, is not a theoretical risk. A recent study by the professors Bowman Heiden and Nicolas Petit<sup>34</sup> concludes that patent hold-out is a ‘significant phenomenon’. Despite explosive growth in the global smartphone market (340% growth for smaller entrants in 2011–2015), SEP licensors have experienced a significant reduction in licensing revenue because of delay (44%) and non-payment (39%). In addition, the study documents a dramatic and steady reduction in licensing coverage for this market (from 73% in 2006 to 39% in 2016).

Courts across the world lay considerable weightage to the conduct of both parties during the licensing process in their decisions. The CJEU, for example, in its decision in *Huawei v ZTE* emphasized the need for good faith negotiations, and allowed for injunctive relief for SEPs under certain circumstances: Firstly, the SEP holder must alert the alleged infringer by specifying the patent and the way it has been or is being infringed; secondly, if the alleged infringer has expressed a willingness to conclude a license agreement on FRAND terms, the SEP holder must present a specific, written offer for a license on FRAND terms to the alleged infringer. On the other hand, for the alleged infringer to avoid an injunction it must

<sup>31</sup>Kirti Gupta and Mark Snyder, ‘Smart Phone Litigation and Standard Essential Patents’ (2014) Hoover IP<sup>2</sup> Working Paper Series No. 14006 <<https://hooverip2.org/working-paper/wp14006/>>.

<sup>32</sup>See Case No. 4a O 73/14 *Saint Lawrence v Vodafone* LG Düsseldorf, Judgement dated 31 March 2016.

<sup>33</sup>There is no concept of treble or punitive damages in India and hence no potential downside for unwilling licensees.

<sup>34</sup>Bowman Heiden and N. Petit, ‘Patent Trespass and the Royalty Gap: Exploring the Nature and Impact of ‘Patent Hold-out’’ (2017) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2981577](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2981577)>.

diligently respond in good faith to the offer made by the SEP holder, with an acceptance or a counter offer; and, if the SEP holder rejects the counter offer the standard user must provide appropriate security for the payment of royalties and render accounts for the use of the SEP/s in question.

The determination of good faith in negotiations to avoid injunctions is based on many factors, such as the demonstration of diligence, conduct, timeliness, and willingness to conclude a licensing agreement by both parties. While courts have clarified that the time to declare willingness to conclude a license agreement on FRAND terms depends on the circumstances of each individual case. German courts dealing with large companies considered that five and even three months of delay in negotiating a SEP license showed unwillingness on the part of the licensee.<sup>35</sup> Additionally, on the question of a timely counter offer, the German district courts held that six months<sup>36</sup> and eighteen months<sup>37</sup> after the initial offer were untimely. As a result, an alleged infringer can only raise the FRAND defense, if the counteroffer is made without delay considering the circumstances of the particular case.

Following such reasoning, injunctions have been granted in a few jurisdictions where it was proven that technology users were ‘unwilling’. In the *ZTE v Vringo*<sup>38</sup> case, the Hague District Court held that ZTE was not a willing licensee. Similarly, the Korean Fair Trade Commission (KFTC) held<sup>39</sup> that Apple was not a willing licensee based on a series of reasons: it initiated a patent infringement action against Samsung while negotiations were still underway; it proposed licensing terms that devalued Samsung’s patent, and it engaged in reverse hold-up as supported by the fact that it did not intend to pay out any royalties until the litigation was concluded. In the US (*Apple v Motorola*)<sup>40</sup> the Federal Circuit rejected a per se rule against granting injunctive relief to standard essential patent holders. The FC argued that where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect, the patent holder no longer bears singular responsibility for concluding a contract. Thus, the SEP holder should receive in such situations appropriate relief for infringement. In an interim court order the Delhi

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<sup>35</sup>See Case No. 2 O 106/14 *Saint Lawrence v Deutsche Telekom* (2015) LG Mannheim, Judgement dated 27 November 2015; *Saint Lawrence* (n 32); See Case No. 7 O 66/15 *NTT DoCoMo v HTC* (2016) LG Mannheim, Judgement dated 29 January 2016.

<sup>36</sup>*Saint Lawrence* (n 32).

<sup>37</sup>*NTT DoCoMo* (n 35).

<sup>38</sup>Vringo made ZTE an ultimate licensing offer in June 2014, after their request for a customs seizure was accepted. Only a month into the proceedings, did ZTE make a counteroffer to Vringo. The court denied ZTE’s claims, stating that ZTE could not be considered a willing licensee under FRAND, Case No. C/09/470109/KG ZA 14-870 *ZTE v Vringo* The Hague District Court, Judgement dated 24 October 2014.

<sup>39</sup>Korean Fair Trade Commission (KFTC) *Samsung Electronics Co. Ltd.*, Judgement dated 26 February 2014.

<sup>40</sup>*Apple Inc.* (n 29).

High court<sup>41</sup> also highlighted how unwilling licensees continue to infringe on patents and how they entered in delaying tactics by filing a case before the Competition Commission of India (CCI), while the negotiations were still active and ongoing for more than four years.

As can be seen in jurisdictions around the world, there is significant jurisprudence on the conduct of parties, particularly on how to incentivize good faith negotiations between them, penalizing bad faith negotiation.

## 5 Industry Best Practices and the Role of Injunctions

In the recent debate on FRAND licensing, we are witnessing an increased scrutiny and refusal of consolidated industry practices based on supposedly economic efficiencies. Critics of current licensing best-practices assert that the current licensing framework is no longer fit for the purpose it is meant to serve. Despite the lack of evidence that the current regime is harming competition and consumers, some are questioning practices such as: (i) FRAND-based access to standardized technologies at the end user device level, (ii) valuation methodologies built on comparable agreements and use-based licensing as a function of elasticity of demand and value added by the patented technology, and (iii) negotiations focusing on portfolio license aimed at guaranteeing freedom to operate.

These three claims will be examined in more detail in the following parts, including the role of injunctions in a functioning licensing environment. Anti-patent rhetoric tries to turn market efficiency—where negotiations between a patent owner and an implementer aim at providing freedom to operate in a streamlined and economically efficient fashion—into some sort of unjustified behavior.

### 5.1 ‘Access for All’ Against ‘License to All’

What happens, if industry practices based on efficiency are subverted, and licenses have to be granted at chip manufacturers level? What is licensed and what is not? As a product manufacturer, do I have freedom to operate? What happens, if a licensed chipset for standard implementation ends up in a competitive, proprietary, non-standard device? These are all valid questions that arise when licensees, policy makers or other stakeholders try to define the Non-Discriminatory (ND) prong of FRAND as an obligation to license across the supply chain, the so-called ‘license to all’<sup>42</sup> obligation.

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<sup>41</sup>*Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (Publ)* (2013) Competition Commission of India, Case 50/2013; *Intex Technologies (India) Limited v Telefonaktiebolaget LM Ericsson (Publ)* (2013) Competition Commission of India, Case 76/2013.

<sup>42</sup>Various terms are used to describe the concept, including ‘license to all’, ‘refusal to license’, ‘licensing level discrimination’, ‘compulsory licensing’.

Telecommunications standards define the air interface between user equipment and the network. Some inventions may even cover both ends of the interface, i.e. both the user equipment as well as the base station is covered by patent claims in a sender-receiver fashion. The landscape of patent claims covering the standard and the continuous evolution of the standard creates a very dynamic situation. On top of these two moving parts, some features of the standard are mandatory and some are optional, adding even more complexity to how the standard is implemented in fully compliant products.

Economic efficiencies have identified, at least in the mobile industry, the end user device as the suitable attachment point, in order to license one level of the supply chain in a simple, transparent, and cost-effective (for both patent owners and licensees) way. A single license at the device level ensures access to the technology for the whole supply chain. The fact that there is only a single license provides obvious benefits in terms of simplicity and efficiency.

The pace of innovation, that standards based on FRAND and consolidated licensing practices have created, is unprecedented. Also, the competitive level of the mobile industry (with new entrants and falling prices) is a testament to the vitality and dynamism of the ICT sector, and proof of availability and affordability of the technology to all. Consolidated industry practices have facilitated a successful licensing framework that has brought us 2G, 3G and 4G, and which is bringing 5G on an accelerated timeline.

A proposed compulsory ‘license to all’ obligation for SEPs basically requires a patent holder to grant a license to any party that requests so, regardless of where in the value chain that party operates. Many levels of a value chain price their components based upon manufacturing costs and a slim margin. Thus, industry practice is and has been not to license at the component level, so that such business models do not account or support FRAND royalties. Moreover, efficiency requires a simple licensing regime, ideally with a single patent license allowing access for all in the value chain. A single license at the user device level provides access to the patented technology to all suppliers and component manufacturers upstream.

Conversely, an obligation to license at different levels of the value chain would inevitably result in several inefficiencies, including:

- Licenses at upstream levels would result in patent exhaustion in the downstream market. Since it is not allowed to license the same patent twice in a product, licensing to a chipset manufacturer (upstream) would avoid the license to the smartphone (downstream).
- Licenses granted at component level could result in the patent owner having to negotiate separate licenses with different manufacturers for the same user device. This would inevitably result in inefficiencies and complexity, leading to increased costs for both licensor and licensees and, ultimately, higher prices for consumers.
- Licenses at upstream levels could easily result in licenses to components which end up in non-standardized products or in products built to competing standards.
- Licenses would be granted at a level which does not support FRAND royalties.

- Licenses could be granted at a level which does not provide effective reciprocity for the licensor and the licensee, which is a key element to protect FRAND licensors.

## ***5.2 Use-Based Licensing v Smallest Saleable Patent Practicing Unit (SSPPU)***

There is a fundamental difference between value and cost. Economists conceive innovation as a productivity improvement from an increase in capital—that is, the incremental value that the patented invention adds to the end product. It is, thus, impossible to properly express the economic effect of an innovation without reference to the product price and to the quantities of other inputs available for production.

Royalties follow market-based price elasticity of demand. They reflect the price a consumer is willing to pay for the features enabled by the technology, and different verticals exhibit different elasticity and willingness to pay for the technology (for example, the value of cellular technology on a car is much higher than on a smart meter). Several approaches can be utilized to determine the value of a new technology, for instance the upcoming 5G, and the associated aggregate royalty level before any comparable licenses exist.<sup>43</sup> For example, with respect to 5G, the following methodologies can be used:

- Valuing expected technical benefits of 5G over prior standard generations;
- Analyzing studies and court decisions regarding 4G royalty stack;
- Mobile device pricing comparison.

As argued by scholars and judges alike, the value of a book does not equal the cost of the paper. The value of a technology has nothing to do with the cost of a component. The value added to the user (and to the manufacturer, in this IoT era) should guide valuation. Focusing on cost is a short-term, short-sighted strategy that goes against the very principle of patent law. i.e., guaranteeing investments in future innovation. Antitrust is inevitably focusing on the present, while patent law focuses on the future.

Static efficiency (the now) is not always the right framework to analyze patent cases. Dynamic efficiency (the future), on the other hand accepts, for example, that monopolist positions now can lead to increased investments and innovation in the future. And yet a patent is hardly a monopoly. ‘At best, a patent gives one the opportunity to charge monopoly profits. [...] Furthermore, others are allowed to

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<sup>43</sup>David Kennedy and Larry Tedesco, ‘5G SEPs—How Can Early Implementers Predict Aggregate Royalties?’ (*iam*, 2018) <<http://www.iam-media.com/Intelligence/IAM-Yearbook/2018/Country-by-country/5G-SEPs-how-can-early-implementers-predict-aggregate-royalties>>.

improve the product and block the original patent owner'. This is especially true for (F)RAND assured essential patent.

### 5.3 *Portfolio as Welfare Enhancing*

Consolidated industry practices are generally based on portfolio licenses that cover all essential patents by the licensor for a specific standardized technology and in a specific field of use. This approach guarantees freedom to operate for licensees in said field of use.

Some potential licensees, often to stall or delay negotiations, are suggesting a lengthy patent-by-patent negotiation, and often argue over validity, infringement and value for each patent. This behavior has become more and more prevalent. This is true, particularly in the developing world, but also increasingly in the developed world. Incidentally, the new patent policy by the Institute of Electrical and Electronics Engineers (IEEE),<sup>44</sup> has led to a huge decrease of willingness to license under such policy.<sup>45</sup> IEEE policy recommends that negotiations, and possibly adjudication proceedings, follow precisely a patent-by-patent approach.<sup>46</sup>

When faced with litigation, to delay or stall negotiations, some unwilling licensees are increasingly requesting the court to determine FRAND royalties based on the patents in suit instead of the whole portfolio, and only for the coverage of the

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<sup>44</sup>IEEE-SA Standards Board Bylaws <<http://standards.ieee.org/develop/policies/bylaws/Sect6-7.html>>.

<sup>45</sup>According to Mallinson, following the adoption of the new IPR Policy favoring standard users' position:

almost three quarters (i.e. 73%) of LOAs [Letters of Assurance] for the IEEE flagship 802.11 WiFi standard, accepted by IEEE and posted on its website in the 18-month period to June 2017, are 'negative' LOAs, indicating the submitter's legitimate ex ante refusal to pledge [F]RAND licensing under the new patent policy. Nearly half (i.e. 47%) of all accepted LOAs posted on the IEEE website over the same period are negative LOAs. More than one third (i.e. 42%) of companies portrayed as leaders with LOAs to IEEE standards are unwilling to pledge their SEPs under the new patent policy or have not provided LOAs when asked to do so.

See Keith Mallinson, 'Development of Innovative New Standards Jeopardized by IEEE Patent Policy' (*4ipCouncil*, September 2017) <[http://www.4ipcouncil.com/application/files/6015/0479/2147/Mallinson\\_IEEE\\_LOA\\_report.pdf](http://www.4ipcouncil.com/application/files/6015/0479/2147/Mallinson_IEEE_LOA_report.pdf)>.

<sup>46</sup>The IEEE, through a process that did not seek consensus among participants but instead was conducted with a lack of transparency, decided to substantially change its patent policy in 2015. The new policy favors certain business models and devalues the technologies developed and contributed by several technology providers that rely on licensing to foster further R&D and participation. Keith Mallinson and Wise Harbor describes some of the most controversial changes that the new policy introduced, highlight significant side effects to the whole industry, and looks at some specific facts that demonstrates the negative impact of the policy on participation to the standardization efforts. Mallinson (n 45).

country where the suit takes place. This is what has been called a patent-by-patent strategy, which would force SEP holders to choose between endless litigation or agreeing to royalties that are below FRAND. Such conduct has been qualified as ‘unfair’ in Europe,<sup>47</sup> where courts have recognized that worldwide portfolio licensing is a well-established industry practice.<sup>48</sup> Moreover, in some courts an unwilling licensee could face an injunction if it is infringing worldwide patents that are essential to a particular standard.<sup>49</sup>

## **5.4 The Role of Injunctions**

As the acting Chair of the Federal Trade Commission (FTC), Maureen Ohlhausen has recently argued that:

The cost of an overbroad antitrust rule in the standard-setting space—one that effectively prevents SEP owners from even asking for injunctions—is hold-out and patentee under-compensation. That is a danger that antitrust agencies have overlooked.<sup>50</sup>

Without deterring factors, or at least the threat of it, SEP users unwilling to get a license would gain considerable advantage *vis-à-vis* the competition by freeriding. Injunction is a tool to avoid such behavior. Free riders not only use technologies developed by others without retribution, hence limiting the developers’ ROI, but they are also unfair to their competitors. By paying no royalty, they can price their products, for instance mobile phones, below those manufactured by competitors. Ultimately innovation will suffer and the market may fail.

We should note that a voluntary FRAND commitment cannot become a compulsory license scheme that violates the very principle of patent rights as well as international trade agreements. This has been supported by antitrust agencies. For instance, the US Department of Justice (DOJ) Assistant Attorney General (AAG) Makan Delrahim recently delivered speech at the University of Southern California (USC).<sup>51</sup> Delrahim made it abundantly clear that patent holders have the right to enforce their patents and that a FRAND commitment cannot be unilaterally used to violate such right:

<sup>47</sup>Saint Lawrence (n 32).

<sup>48</sup>Case 29437/3/2015 *Vringo v ZTE* (2015) Bucharest Court of Appeal 4th Civil Division, Judgement dated 28 October 2015; Case No. 7 O 97/14 LG Mannheim, Judgement dated 4 March 2016. *Saint Lawrence* (n 32); *ibid*; *Unwired Planet* (n 28) 157.

<sup>49</sup>*Unwired Planet* (n 28) 97.

<sup>50</sup>Maureen K Ohlhausen, ‘The Elusive Role Of Competition In The Standard-Setting Antitrust Debate’ (2017) 20 Stan. Tech. L. Rev. 93.

<sup>51</sup>Department of Justice, ‘Assistant Attorney General Makan Delrahim Delivers Remarks at the USC Gould School of Law’s Center for Transnational Law and Business Conference’ (*The United States Department of Justice*, 10 November 2017) <<https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center>>.

The enforcement of valid patent rights should not be a violation of antitrust law. A patent holder cannot violate the antitrust laws by properly exercising the rights patents confer, such as seeking an injunction or refusing to license such a patent. [...] We should not transform commitments to license on FRAND terms into a compulsory licensing scheme. Indeed, we have had strong policies against compulsory licensing, which effectively devalues intellectual property rights, including in most of our trade agreements, such as the TRIPS agreement of the WTO. If an SSO [Standards Setting Organization] requires innovators to submit to such a scheme as a condition for inclusion in a standard, we should view the SSO's rule and the process leading to it with suspicion, and certainly not condemn the use of such injunctive relief as an antitrust violation where a contract remedy is perfectly adequate.

Delrahim's speech also signals a significant shift in the approach the DOJ has had towards certain SDOs, most notably the IEEE. Delrahim encourages SDOs to maintain internal antitrust compliance programs to monitor whether their policies are or may become anticompetitive.

## 5.5 Enhanced Damages for Unwilling Licensees

Recent court cases, especially the CJEU decision in *Huawei v ZTE*, have helped determining a framework to identify good-faith negotiation tactics *vis-à-vis* abusive behavior or unwillingness. On the contrary, other court cases<sup>52</sup> have failed to determine appropriate remedies when faced with an unwilling licensee, and have often erred by focusing excessively on possible abuses or discriminatory behavior by the licensor.<sup>53</sup>

As Wong-Ervin explains:

[I]n the case of an infringer who is engaged in hold-up or hold-out, enhanced damages may be appropriate and necessary to deter such conduct and adequately compensate the SEP holder. Indeed, if the worst penalty a SEP infringer faces is merely paying, after an adjudication, the FRAND royalty it should have agreed to pay when first asked, then hold-up and hold-out give implementers a profitable way to defer payment.<sup>54</sup>

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<sup>52</sup>See for example *Unwired Planet* (n 28); *TCL Mobile Limited, and TCT Mobile v Telefonaktiebolaget LM Ericsson* (2018) District Court for the Central District of California, Case No. 8:14-CV-00341-JVS-DFM.

<sup>53</sup>Alexander Galetovic and Stephen Haber, 'The Fallacies of Patent Hold-up Theory' (2016) Hoover IP<sup>2</sup> Working Paper No. 16009 <<http://hooverip2.org/working-paper/wp16009/>>. The debate around FRAND licensing has put an unreasonable weight on combating the hold-up problem (which has been demonstrated to be relatively nuanced and non-systemic) while condoning hold-outs and efficient infringement (for a discussion on 'efficient infringement'); See, for example, Gene Quinn, 'A Patent Owner Defending Property Rights is not a Bully' (*IPwatchdog*, 16 December 2015) <<http://www.ipwatchdog.com/2015/12/16/patent-owner-defending-property-rights-not-bully/id=63900/>>. Quinn points out to a real problem that is threatening the ICT industry.

<sup>54</sup>Anne Layne-Farrar and Koren Wong-Ervin, 'Methodologies for Calculating FRAND Damages: An Economic and Comparative Analysis of the Case Law from China, the European Union, India, and the United States' (2017) 8(2) Jindal Global Law School Law Review 127.

## 6 Royalty Stacking—A Unicorn that Does not Exist

SEPs have been instrumental in the growth of the global telephony market and the revenue and jobs generated from it across the world. Royalty stacking appears when the cumulative royalty rate for all SEPs needed to manufacture a smartphone is unaffordable. According to their proponents due to the large number of SEPs contained in a smartphone the cumulative royalty rate for such a device could easily achieve royalty stacking, even if the SEP holders would request separately a FRAND rate.

As already pointed out, FRAND licensing has given a substantial lift to the entry and growth of businesses across the world, and this can be seen from the fact that profits have tripled<sup>55</sup> from 2007 to 2013. Consumer adoption of 3G and 4G standards has outpaced that of all other technologies, growing to nearly three billion connections in less than 15 years, and projected to exceed eight billion connections by 2020.<sup>56</sup> India has also seen a phenomenal growth of its handset manufacturing business, as can be seen in the graph below. The net worth of the Indian handset-manufacturing sector grew 115%, going from INR 45,000 crores (6.9 billion USD) in 2014 to INR 97,000 crores (15 billion USD) in 2016 (Fig. 5).<sup>57</sup>

The fact that royalty stacking is theoretical has also been acknowledged in the *Ericsson v D-Link* case by the US Federal Circuit court. In this case,<sup>58</sup> defendants brought up royalty stacking as being a problem, but ultimately failed to convince the court of any real evidence of harmful stacking. In the appeal proceedings, when the defendants claimed that the Chief Judge Davis had failed to inform the jury to make consideration for the possibility of patent hold-up and royalty stacking, the Federal Circuit court found that Chief Judge Davis did not have a responsibility to do that, since no empirical evidence of that conjecture existed.<sup>59</sup> In this particular case, sound scepticism to alleged stacking problems was clearly expressed by the court.

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<sup>55</sup>Richard J Stark, ‘Debunking the Smallest Saleable Unit Theory’ (2015) 2 CPI Antitrust Chronicle 2–10. Stark states that ‘the size of the handset market has greatly expanded, as global revenues have doubled in the last six years. According to Credit Suisse, handset manufacturer operating profits tripled between 2007 and 2013, reaching US \$51 billion’.

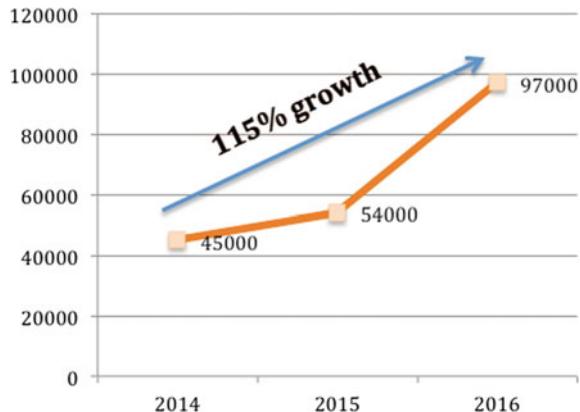
<sup>56</sup>BCG (n 2).

<sup>57</sup>Karan Kashyap, ‘Here’s How India Is Becoming A Hub For Smartphone Manufacturing In South Asia’ (*Forbes*, 22 February 2017) <[>](https://www.forbes.com/sites/krnkashyap/2017/02/22/heres-how-india-is-becoming-a-hub-for-smartphone-manufacturing-in-south-asia/#4c2827923be8).

<sup>58</sup>*Ericsson, Inc. v D-Link Sys., Inc.* (2014) US Court of Appeals for the Federal Circuit, 773 F. 3d 1201, 1225–29.

<sup>59</sup>*ibid* 1235.

**Fig. 5** Net worth of the Indian handset manufacturing business. (Karan Kashyap, 'Here's How India Is Becoming A Hub For Smartphone Manufacturing In South Asia' (*Forbes*, 22 February 2017) <<https://www.forbes.com/sites/krnkashyap/2017/02/22/heres-how-india-is-becoming-a-hub-for-smartphone-manufacturing-in-south-asia/#4c2827923be8>>)



Several research reports have proven that the global aggregate royalty rate for mobile handsets has been reasonable. This is also reflected by growing competition with more than hundred brands selling their phones through both online and offline sales.<sup>60</sup> A report by Keith Mallison clearly establishes that the '[c]umulative mobile Standard Essential Patents-royalty payments as no more than around 5% of mobile handset sales'.<sup>61</sup> Haber states that the global royalty yield as a percentage of the average sales price have been less than 3.5%.<sup>62</sup>

A study of the smartphone industry in India has shown trends like those that have been seen across the world, debunking the myth, that *royalty stacking* has caused enormous pressure on businesses in India. The assumption that excessive royalty payments are made leading to increased prices of telecom equipment,<sup>63</sup> is not correct considering the annual reports of companies submitted to the Ministry of Corporate Affairs (MCA),<sup>64</sup> which clearly show that royalty payments are not at all problematic.

The MCA filings made by 19 telecom equipment manufacturing companies,<sup>65</sup> which can be seen in the table below, reveal that for the fiscal year 2015–16, at least

<sup>60</sup>Tyagi (n 23).

<sup>61</sup>Keith Mallinson, 'Smartphone Revolution' *IEEE Consumer Electronics Magazine* (April 2015) 60.

<sup>62</sup>Galetovic (n 53); Alexander Galetovic, Stephen Haber and Ross Levine, 'An Empirical Examination of Patent Hold-up' (2015) 11 (3) *Journal of Competition Law & Economics* 549. Keith Mallinson, 'Cumulative Mobile-SEP Royalty Payments no More Than Around 5% of Mobile Handset Revenues' (*IP Finance*, August 2015) <<http://www.ipfinance/2015/08/cumulative-mobile-sep-royalty-payments.html>>.

<sup>63</sup>Telecom Regulatory Authority of India (TRAI) highlights that the telecom equipment manufacturers expend large amounts on royalty payments. TRAI, 'Consultation Paper on Promoting Local Telecom Equipment Manufacturing' (New Delhi, 18 September 2017).

<sup>64</sup>Available from the Ministry of Corporate Affairs (MCA) website.

<sup>65</sup>These 19 telecom equipment manufacturing companies were selected on the basis of market capitalization. Annual submissions made by these companies to MCA reveals following data:

14 of the 19 companies showed zero expenditure on royalty payments. The annual returns of an additional four were unavailable on the MCA website. Only two companies (MYMO wireless and Nelco) showed royalty payments made on their financials. Nelco made the payments to Centre for Development of Telematics (CDOT). This data shows that the issue of royalty stacking is irrelevant, as far as the telecom equipment manufacturers are concerned (Table 1).

Additionally, there is an assumption that handset manufacturers pay excessive amounts in royalty payments. Looking at the companies' annual returns filed with the MCA<sup>66</sup> one can see that seven large handset manufacturers,<sup>67</sup> made no royalty payments from FY11–12 to FY14–15, except for Micromax, which made royalty 'provisions'<sup>68</sup> (not payments). This data shows that the assumption that royalty payments are driving up the costs of manufacturing for handset manufacturers is not correct (Table 2).

The entry of new Indian businesses into the market as well as their exponential market growth is a clear evidence of the fact that there is no systemic abuse. There has not been any appreciable adverse effect on competition, as the market has more players than ever before. The astronomical growth of the Indian handset-manufacturing sector shows that companies have the capability to pay for reasonable royalties. However, their willingness to pay for it seems to be lacking despite how essential IPR is to development of new technologies.

## 7 Price Differentiation and Economic Efficiencies

Charging different prices for the same product or service is defined in economic literature as price discrimination. It has been argued by a few that the non-discriminatory part of a FRAND commitment implies that a patent owner should offer the same licensing rates for the same standardized technology to all licensees.<sup>69</sup> Although at a first glance, this may sound logical, such assertion

<sup>66</sup>Tejas Networks (which has a license for optical technologies from CDOT) paid Rs. 0.15 crores (0.036% of the total revenue) in 2013–14 and Rs. 0.09 crores (0.022% of the total revenue) in 2014–15, and Nelco paid Rs. 1153 lacs (to CDOT) (8.324% of the total revenue) in 2015–16. For FY 2015–16.

<sup>67</sup>MCA (n 64).

<sup>68</sup>The seven companies referred to above are—Celkon, Intex Technologies, Karbonn, Lava International, Maxx Mobiles, Micromax Informatics, and Spice Digital.

<sup>69</sup>Micromax made provisions for royalty in FY13–14 (Rs. 1500 million) and FY14–15 (Rs. 1092.41 million) according to the annual returns filed with MCA.

<sup>69</sup>See Fair Standards Alliance <<http://www.fair-standards.org/>>.

**Table 1** Data synthesized from annual reports submitted by the companies to MCA (Ministry of Corporate Affairs)

S. No.	Name of company	Royalty payments made during FY2015–16
1	Tejas Networks	NA <sup>a</sup> (Rs. 0.09 crs. in FY 14–15)
2	MYMO Wireless	4.9 lacs
3	Saankhya Labs	NA
4	Vihaan Networks	NA
5	Coral Communications	NA (Rs. 0.00 in FY14–15)
6	Bharti Infratel Ltd.	0
7	Honeywell Automation India Ltd.	0
8	Nelco	Rs. 1153 lacs (to DOT)
9	Astra Microwave Products Ltd.	0
10	MIC Electronics Ltd.	0
11	Aishwarya Tech. and Telecom Ltd.	0
12	GTL Ltd.	0
13	Punjab Communications Ltd.	0
14	Valient Communications Ltd.	0
15	Precision Electronics Ltd.	0
16	HFCL	0
17	ITI Ltd.	0
18	GTL Infrastructure Ltd.	0
19	Aplab Ltd.	0

These 19 telecom equipment manufacturing companies were selected on the basis of market capitalization. Annual submissions made by these companies to MCA reveals following data: Tejas Networks (which has a license for optical technologies from CDOT) paid Rs. 0.15 crores (0.036% of the total revenue) in 2013–14 and Rs. 0.09 crores (0.022% of the total revenue) in 2014–15, and Nelco paid Rs. 1153 lacs (to CDOT) (8.324% of the total revenue) in 2015–16. For FY 2015–16

<sup>a</sup>Royalty payments made by Tejas Networks to CDOT in year 14–15

**Table 2** Data synthesized from annual reports submitted by the companies to MCA (Ministry of Corporate Affairs)

Manufacturer	FY 11–12	FY 12–13	FY 13–14	FY 14–15
Celkon	0	0	0	0
Intex Technologies	0	0	0	0
Karbonn	NA	NA	0	0
Lava International	0	NA	0	0
Maxx Mobile	0	0		NA
Micromax Informatics	0	NA	1500 (millions of INR)	1092.41 (millions of INR)
Spice Digital	0	0	0	0

Annual reports available at MCA (Ministry of Corporate Affairs) website

contradicts decades of successful licensing practices and it goes against basic economic principles.<sup>70</sup>

Economic literature has demonstrated that price differentiation can increase efficiency, increase output, promote investments in innovation and improve consumer welfare.<sup>71</sup> Under some circumstances, by charging a unique price to a unique customer, or different prices to different groups of customers, output increases and markets become entirely efficient, even in the presence of market power.<sup>72</sup>

Price differentiation is common in most industries and sectors. For instance, movie theaters offer discounted tickets to students in off-peak hours to spread fixed costs among a larger users base; airlines charge different prices for very similar seats and identical services according to complex algorithms that account for a lot of parameters such as seat availability and customer willingness to pay; game console manufacturers often price consoles below market price to attract a larger community and differentiate on the price of games; and software developers sometimes decide to release code for free charging different prices to different customers for added services or maintenance. Ultimately, price discrimination reflects the fundamental economic principle of demand elasticity: the price of a specific service, product or technology is a function of the actual and perceived surplus by the user and its willingness to pay for that service, product or technology.

The concept of price differentiation in technology licensing is particularly important as it applies to IoT, where the use of the technology, the associated requirements and ultimately the value added by said technology will differ widely from one vertical to another. In the IoT, an estimated of 25 billion devices will be connected by 2020. Cellular standards in the IoT will be incorporated in non-ICT sectors such as agriculture, banking and finance, maritime trade, and transportation.<sup>73</sup> These sectors, not familiar with licensing in the ICT sector would benefit from a transparent licensing platform, which reflects in its licensing the value that the standardized technology brings to the end product. In an effort to achieve broad dissemination of IoT in a fair manner, Ericsson and other major contributors of cellular technology have created an independent industry patent licensing platform for IoT called Avanci.<sup>74</sup> Avanci is a one-of-a-kind platform designed to efficiently and predictably license standard essential patents for the cellular standards to all of

<sup>70</sup>It should be noted that it is also discriminatory to charge the same price to costumers when costs differ, Anne Layne-Farrar, ‘Nondiscriminatory Pricing, Is Standard Setting Different?’ (2010) 6(4) *Journal of Competition Law & Economics* 811.

<sup>71</sup>ibid.

<sup>72</sup>Lars Stole, ‘Price Discrimination and Competition’ in Mark Armstrong and Robert (eds), *Handbook of Industrial Organization* vol. 3 (Elsevier 2007).

<sup>73</sup>Haris Tsilikas and Claudia Tapia, ‘The Internet of Things: Big Data, New Patent Licensing Models and the Role of Standardization’ (*The Patent Lawyer*, 2018).

<sup>74</sup>Avanci <<http://avanci.com/>>.

the industries and products that exist and will be created in the IoT. It provides manufacturers of connected products with an open and streamlined way to license essential wireless technology, making it possible for companies to access all the technology they need with a single license for a flat fee per unit.<sup>75</sup> At the same time, it enables the companies and research institutions that create this technology to recoup their significant investments in R&D.

The concept and motivation behind Avanci recognizes the challenges when products uses and capabilities differ. For instance, fully autonomous vehicles require consistent and high-bandwidth coverage, where data transfer occurs in milliseconds (i.e. low latency). The quality of service in terms of speed and volume needs to be very high. However, other vertical uses and devices like smart meters are far less demanding. Therefore, Avanci is an example of the advantages and fairness of price differentiation. Such differentiation, based on the elasticity of different verticals and the contribution of the technology to the end user device, reflects the value of the technology to end users.

A market-driven, efficiency-enhancing and industry-led approach to licensing in the IoT will achieve a win-win solution for technology users, technology developers and consumers. The cost of the license will strike the optimal tradeoff between market adoption and a fair return to those who are developing the technology. 4G evolution and 5G will introduce connectivity in new use products beyond the traditional uses. This is projected to unlock tremendous value and create benefits for new industries and their consumers.<sup>76</sup> As explained above, those products or services enjoying a higher value from patented 5G connectivity, e.g. remote surgery, autonomous vehicles, industrial real-time applications, will pay a higher royalty than those with strict performance requirements that consequently are not using some of the features in the 5G specification, such as simple sensors.

Contrary to this market-led approach based on price differentiation, setting the same price for a technology across verticals would inevitably result in inefficiencies. If innovators were forced to price 5G equally across different applications irrespective of the value added of the technology, that price would result to be too high for some players, e.g. smart meters, forcing manufacturers not to incorporate such innovative technology. On the other hand, autonomous vehicles would pay far less than what consumers are willing to pay and are currently paying to automotive industry.

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<sup>75</sup>For example, for connected cars Avanci offers its large SEPs' portfolio for USD 3 for eCall, USD 9 for eCall, 2G and 3G, and USD 15 for eCall and 2G to 4G per vehicle, Pricing <<http://avanci.com/pricing/>>.

<sup>76</sup>McKinsey Global Institute, 'The Internet of Things: Mapping the Value Beyond the Hype' (2015) <<https://www.mckinsey.com/~media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/The%20Internet%20of%20Things%20The%20value%20of%20digitizing%20the%20physical%20world/The-Internet-of-things-Mapping-the-value-beyond-the-hype.ashx>>.

Under this background it is important to resist lobbying initiatives led by groups of implementers, in favor of charging the same price for a standardized technology independently of the value it brings to the end product. Naturally, some legal scholars have investigated the risks associated with ‘buyers’ cartels’ in the context of SDOs, and their effects on innovation and R&D investments. Lo Bue,<sup>77</sup> in an analysis of possible antitrust concerns related to the new IEEE patent policy,<sup>78</sup> states that:

[t]he purchasers of technology aim to achieve different objectives compared to SEP holders. Indeed, they want to lower the royalty fees under which access to the standard-essential technology is granted and lobby heavily to reach this goal. Purchasers of technology have strongly campaigned over the years in favour of clearer policies which help to define what FRAND terms are, and they seem to have accomplished their mission on February 9, 2015.

Delrahim also warns against the so-called monopsony effect:

[E]nforcers should carefully examine and recognize the risk that SSO participants might engage in a form of buyer’s cartel, what economists call a monopsony effect. [...] I therefore urge antitrust enforcers [...] to take a fresh look at concerted actions within SSOs that cause competitive harm to the dynamic innovation process.<sup>79</sup>

## 8 Antitrust Considerations

The US antitrust agencies have widely acknowledged industry standards ‘to be one of the engines driving the modern economy’,<sup>80</sup> and that:

[s]tandards can make products less costly for firms to produce and more valuable to consumers. They can increase innovation, efficiency, and consumer choice; foster public health and safety; and serve as a ‘fundamental building block for international trade. Standards make networks, such as the Internet and wireless telecommunications, more valuable by allowing products to interoperate.<sup>81</sup>

Similarly, antitrust enforcers have explained that:

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<sup>77</sup>Marco Lo Bue, ‘Patent Hold-up and Hold-out Under the New IEEE’s IP Policy: Are These Breaches of Competition Law?’ (2016) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2885364](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2885364)>.

<sup>78</sup>IEEE-SA Standards Board Bylaws (n 44).

<sup>79</sup>Department of Justice (n 51).

<sup>80</sup>Department Of Justice and Federal Trade Commission, ‘Antitrust Enforcement And Intellectual Property Rights: Promoting Innovation And Competition’ (2007) 33 <<https://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinnovationandcompetitionrpt0704.pdf>>.

<sup>81</sup>ibid.

[t]he justification for cooperatively setting a standard, as opposed to letting standards develop accidentally or from the technological solutions proposed by individual firms, is that collaboratively-set standards can be more useful to society. In the long run, they may provide a more optimal balance of choosing more advanced technology, costing less to create and implement, and getting to market faster.<sup>82</sup>

The agencies have also recognized that antitrust issues may arise from collaborative standard [development] when standards incorporate technologies that are protected by IPRs. Such issues could involve the perceived potential for ‘hold-up’ by contributors of technology to standards after the standard has been finalized.<sup>83</sup> However, multiple data points over the past 22 years, including from the antitrust agencies themselves, have suggested that such issues are a rare exception, rather than a systemic problem. This part reviews some of these data points.

First, the agencies themselves have recognized multiple market-based factors that may mitigate the risk of hold-up, including the following:

[P]atent holders that are frequent participants in standard-setting activities may incur reputational and business costs that could be sufficiently large to deter fraudulent behavior. Patent holders may also enjoy a first-mover advantage if its technology is adopted as the standard.

As a result, patent holders who manufacture products using the standardized technology:

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

Finally, the agencies have recognized that patent holders that have broad cross-licensing agreements with the SEP-owner may be protected from hold-up.<sup>84</sup>

Second, multiple market players have provided public comments to US antitrust agencies, explaining that collaborative industry standards assured through FRAND assurances generally worked well. In response to a 2011 FTC workshop on patents in standards, dozens of companies and experts have made this point.<sup>85</sup> To take two examples of these, Intel Corporation has explained that:

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<sup>82</sup>ibid. Hill Wellford, [then] Counsel to the Assistant Attorney General, Antitrust Division, US Department of Justice Antitrust Issues in Standard-Setting.

<sup>83</sup>ibid.

<sup>84</sup>Federal Trade Commission, ‘Prepared Statement of The Federal Trade Commission Before the United States Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights Concerning ‘Standard Essential Patent Disputes and Antitrust Law’ (Washington, D.C., 30 July 2013) 6. <[https://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf)>.

<sup>85</sup>Federal Trade Commission, ‘#382: FTC Issues Agenda for Workshop to Explore the Role of Patented Technology in Collaborative Industry Standards; FTC Project No. P111204’ (2011) <<https://www.ftc.gov/policy/public-comments/2013/08/initiative-382>>.

the evidence shows that standard-setting processes generally work well. Thousands of standards are developed every year, generally without incident, and they are normally followed by significant price drops year after year in almost all industry sectors where standards are used. Intel is unaware of any systemic problems of patentees misleading standard-setting organizations (SSOs) or refusing to abide by previous licensing commitments made to those organizations, including commitments to license on reasonable and nondiscriminatory (RAND) terms. To be sure, a few well-publicized disputes have arisen, but they have been the rare exception to the general rule.<sup>86</sup>

Microsoft has explained that:

[t]here are literally thousands of ICT standards in existence today. Hundreds of these standards have been referenced in eGovernment Interoperability Frameworks, with no apparent documented problems relating to IPR issues. There have been a relatively small number of noteworthy litigations that have been commenced when two parties have been unable to agree on whether proffered licensing terms were RAND and/or otherwise met the requirements of the applicable SSO's IPR policy. These are very much the exception, not the rule.<sup>87</sup>

Finally, and perhaps most importantly, the US antitrust agencies enforcement record demonstrates that there has not been a single instance of an antitrust violation resulting from hold-up. This includes a three-year period between 2012–2015, when the Division showed special advocacy interest in this area.

The FTC did bring seven enforcement matters in this area, in the twenty-two years between 1995–2017. However, thus far it has never won such a case in litigation. All these cases were settled by the FTC, a few of them under the parallel pressures of a pending merger. Only one matter, the Rambus case, was fully litigated, ending in a loss for the FTC. See table summarizing these cases (Table 3).

To summarize, US antitrust agencies and industry have both recognized that hold-up is an exception, not a systemic problem. The agencies' interest in standard development cases to date has not translated into any successfully litigated antitrust cases.

Finally, we would be remiss without reminding that Makan Delrahim, who assumed his role in the fall of 2017, appears to take a keen interest in standard development issues. His concern appears to be mostly with collaborative violations. In a seminal 10 November 2017 speech, AAG Delrahim detailed his views in this area,<sup>88</sup> that can be summarized as follows:

<sup>86</sup>Earl Nied, ‘Intel Corporation’s Response to the Commission’s Request for Comments in Connection with Its Patent Standards Workshop, Project No. P11-1204’ (5 August 2011) <[https://www.ftc.gov/sites/default/files/documents/public\\_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-000042/00042-80174.pdf](https://www.ftc.gov/sites/default/files/documents/public_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-000042/00042-80174.pdf)>.

<sup>87</sup>David Heiner, ‘Microsoft comments in connection with Federal Trade Commission Workshop on Standard-Setting Issues, Project No. P111204’ (14 June 2011) <<https://www.ftc.gov/policy/public-comments/comment-00009-28>>.

<sup>88</sup>Makan Delrahim, Assistant Attorney General, ‘Take It To The Limit: Respecting Innovation Incentives In The Application Of Antitrust Law’ (Speech at the USC Gould School of Law, 10 November 2017) <<https://www.justice.gov/opa/speech/file/1010746/download>>.

**Table 3** Enforcement actions by FTC

Matter	Year	Decision type	FTC vote	Alleged conduct and theory
Dell	1995/1996	Consent	4-1	Deception/Disc. violation Section 5 FTC Act
Rambus	2002/2008	Litigated and lost	5-0	Deception/Disc. violation Section 2 Sherman Act
Unocal	2003/2005	Consent (merger)	5-0	Deception/Disc. violation Section 2 Sherman Act; Section 5 FTC Act
N-Data	2008	Consent	3-2	Breach of licensing commitment and transfer issue Section 5 FTC Act
Bosch/SPX	2012	Consent (merger)	3-2	Breach of licensing commitment (abandoned) Section 5 FTC Act
Google/MMI	2013	Consent (merger)	2-1-1	Breach of licensing commitment Section 5 FTC Act
Qualcomm	2017	–	–	Section 2 Sherman Act

- FRAND commitment is not a compulsory licensing scheme. There is no duty to license SEP.
- Hold-out is a more serious antitrust risk than hold-up.
- Collective hold-out (reverse hold-up) is a more serious impediment to innovation and is now a DOJ priority.
- Enforcement of patents, whether essential to a standard or not, including through seeking an injunction, is not an antitrust violation.
- Violation of a FRAND commitment is not an antitrust violation and should be dealt with through contract law.
- Patents are a form of property, and the right to exclude is at their core.
- Risk of technology-buyers' cartel in SDOs.
- DOJ Antitrust division is sceptical of imbalanced SSO patent policies; elements of the new IEEE patent policy used to demonstrate an example of an imbalanced policy.
- Freely negotiated licenses and cross-licenses are the solution.

It would be interesting to watch antitrust enforcement over the next few years, to see where these priorities take US antitrust enforcement.

## 9 Conclusion

The notion that patents cripple innovation is strongly counterintuitive. Erosion of patent rights can only result in the commoditization of technology, where a few monopsonies control the whole value chain. This would harm innovation and, ultimately, consumers, with fewer choices due to lock-ins. The increasing number of manufacturing companies that disrespect IPR (from copyright to patents),

privacy and taxes is bringing ever decreasing margins and revenues for all suppliers, including content providers, authors, musicians and technology providers.

This chapter has shown the relevance of IPR and the enormous success of standardization thanks to the accessibility of SEPs under FRAND terms. Indeed, standardization has led to interoperable and high performance products at a continuously decreasing price to the benefit of consumers. Standardization is not only nowadays indispensable for a successful economic growth in a country. It will also play a key role for the IoT, as billions of devices will be connected thanks to cellular standards.

There is a need for policy makers in India to support a balance of interests between those using and those contributing standardized technology. Although FRAND is to be determined by the parties in bilateral negotiations, policy makers should reinforce good faith negotiations between parties. In the presence of an unwilling licensee, courts could also identify solutions that can discourage bad behavior. This is relevant as the courts have ordered unwilling licensees to pay only the FRAND rate for past infringement. This in a way incentivises hold-out behavior.<sup>89</sup> Hold-out itself can lead to less investment in R&D. On the other hand, if courts discourage hold-out, for example, when presented with multiple offers by the patent owner with no counter-offer by the unwilling licensee or other bad faith negotiation tactics from the SEP infringer, courts could grant an injunction and/or order high damages. Another way courts could support quick, binding and transparent solutions to encourage good faith negotiations would be if they would initially make an interim and provisional decision on FRAND (to decide whether or not to grant injunction) and make a final and definitive decision on FRAND at a later stage. This would exert pressure on the parties to engage in negotiation in a timely manner and in good faith.<sup>90</sup>

**Disclosure** The views presented reflect the individual views of the authors. They do not necessarily reflect Ericsson positions.

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<sup>89</sup>Why would an unwilling licensee negotiate a license when it can freely infringe and wait until it gets sued in the court? Royalty required to be paid by such an unwilling licensee after the court ruling would also be on FRAND rates, especially in jurisdictions that do not impose damages for such unwilling conduct.

<sup>90</sup>Haksoo Ko, ‘Facilitating Negotiation for Licensing Standard Essential Patents in the Shadow of Injunctive Relief Possibilities’ (2013) <<https://ssrn.com/abstract=2267280>>.

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## **Chapter 4**

# **The Role of the European Commission in the Development of the ETSI IPR Policy and the Nature of FRAND in Standardization**



**Eric L. Stasik**

### **1 Introduction**

There is a large body of research on fair, reasonable, and non-discriminatory (FRAND) focused on the licensing of Standard Essential Patents (SEPs) after a standard has been released to the public and implemented into products, but surprisingly little attention has been given to important role FRAND plays in the development of standards themselves. This chapter provides an overview of the European Commission's (EC) involvement in the development of the European Telecommunications Standard Institute's (ETSI) Intellectual Property Right (IPR) Policy which illuminates on the vital role that FRAND plays in the process of standards development.

FRAND is usually presented as a bi-lateral matter between SEP holders and licensees of SEPs which arises after standards have been implemented into products, but there is another absolutely fundamental aspect of FRAND which must not be over-looked and this is FRAND's practical and useful role in the rapid development and deployment of Information and Communications Technology (ICT) standards. For students of public policy, a review of the EC's role in the creation of ETSI and the EC's hands-on involvement in the development of ETSI's benchmark IPR Policy provides an example of successful—and limited—regulatory intervention and enables a deeper understanding of the problems associated with SEP licensing and the nature of the FRAND obligation.

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## 2 European Union's Initiative

The EC is the European Union's (EU) executive branch. It is the only body in the EU that promotes the general interest of the EU and takes decisions on the EU's political and strategic direction. Green Papers are documents published by the EC to stimulate discussion on given topics at the European Level. The EC's Green Papers initiate a consultation process amongst relevant parties and may also give rise to legislative actions.<sup>1</sup>

Thirty years ago, Europe's telecommunications landscape was a patchwork of national state-owned monopolies which excluded competition, stifled innovation, and reeked of economic inefficiency. In 1987, the EC issued a Green Paper on the Development of the Common Market for Telecommunication Services and Equipment (COM(87) 290 final) which proposed to liberalize and harmonize the telecommunications market within the EU.<sup>2</sup> There were three components to the EC's telecommunications policy; the creation of common technical standards at the EU level; progressive liberalization of the equipment and services market across the EU; and the gradual privatization of state-owned telecommunication monopolies which would be handled at a national level.<sup>3</sup> The ambitions of this policy were as much political as economic. As the EC's Green Paper observed, not only would 'a technically advanced, Europe-wide and low-cost telecommunications network' improve European competitiveness, it would achieve priority Community goals of fostering the Internal Market and strengthening Community cohesion.<sup>4</sup> It was also simply a matter of timing. In its Green paper, the EC recognized that an 'inevitable trend' towards 'the convergence of telecommunications, computing, and applications of electronics in general' was already being manifested in 'the convergence of certain trends at nation levels' such as steps already taken 'to ensure the interoperability of networks, terminals, and services by actively promoting the standardization policy conducted at European level since 1984.'<sup>5</sup> In this light, the EC's actions could be seen as an effort to get in front of (or to simply catch up with) policy shifts that already had their own organic momentum. With regard to the nascent mobile communications industry, however, the EC took a commanding lead noting that 'five different incompatible systems' were implemented in member states and

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<sup>1</sup>Glossary of Summaries: Green Paper (EUR-Lex) <[http://eurlex.europa.eu/summary/glossary/green\\_paper.html](http://eurlex.europa.eu/summary/glossary/green_paper.html)>.

<sup>2</sup>European Commission, *Green Paper On The Development Of The Common Market For Telecommunications Services And Equipment* (COM(87) 290) final.

<sup>3</sup>Micheal Blauberger, The Political Economy Of European Union Competition Policy: A Case Study Of The Telecommunications Industry-By T. Baskoy (2009) 47(4) Journal of Common Market Studies 919.

<sup>4</sup>European Commission (n 2) 12.

<sup>5</sup>ibid 3.

commenting critically that ‘mobile systems have been one of the worst examples of lack of Community-wide compatibility’.<sup>6</sup> To redress this hodgepodge of mobile networks, the EC called for the ‘creation of a Community-wide market for terminals and equipment’ noting that ‘this concerns in particular the promotion of Europe-wide open standards, in order to give equal opportunity to all market participants’.<sup>7</sup>

A sense of urgency was provided by the Community goal to complete the Single Market before 1 January 1993.<sup>8</sup> The EC stressed that ‘the time it takes for the establishment and common application of international standards must be substantially reduced, in order to maintain future network integrity and to promote the availability and interoperability of efficient Europe-wide and worldwide services.’<sup>9</sup> The EC proposed that the development of harmonized specifications for this liberalized market would be facilitated by the creation of a new European standardization body ‘based on the current cooperation of the Telecommunications Administrations within Conference of Postal and Telecommunications Administration (CEPT) and CEN-CENELEC’,<sup>10</sup> but also having a fair representation of all relevant actors.<sup>11</sup>

### 3 Setting up of ETSI

In response to the EC’s proposal, ETSI was set up in 1988 by the European CEPT, but outside of the CEN-CENELEC framework suggested by the EC. With the January 1993 deadline rapidly approaching, the EC issued another of its Green Papers (COM(90) 456 final) recommending that the process of technological integration had to be accelerated noting that ETSI ‘represented a radical change in approach to European standardization insofar as it provided for the direct participation at European level of all interested parties in standardization work rather than for representation through national delegations headed by the national standards body’.<sup>12</sup> National delegations headed by national standards bodies developed the CEN-CENELEC framework originally envisaged by the EC. By departing from the existing model ETSI offered the EC and European industry a choice: ‘... accept the present structure of standardization in Europe, from which European standards will emerge relatively slowly over the next few years, or it can decide to commit itself

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<sup>6</sup>ibid, para 4.4.2, 88.

<sup>7</sup>ibid, s II A, 5.

<sup>8</sup>European Commission, ‘Single Market Act – Frequently Asked Question’ (2010) <[http://europa.eu/rapid/press-release\\_MEMO-10-528\\_en.htm](http://europa.eu/rapid/press-release_MEMO-10-528_en.htm)>; The Single European Act which came into force in July 1987 set out a timeline for establishing the Single Market over a period up to the end of 1992.

<sup>9</sup>European Commission (n 2) 13.

<sup>10</sup>ibid 22.

<sup>11</sup>Rudi Bekkers and Isabelle Liotard, ‘European Standards For Mobile Communications’ (1999) 3 EIPR 110.

<sup>12</sup>European Commission, ‘Green Paper on the Development of European Standardization: Action for Faster Technological Integration in Europe’ COM (90) 456 final, paras 23, 16.

whole-heartedly to the rapid development of common European standards'.<sup>13</sup> As the EC pointed out 'Efficiency in the production of European standards is, from the EC's point-of-view, the highest priority; the operation of Community product legislation depends upon it.'

The departure from the CEN/CENELEC framework and the introduction of manufacturers and other interested parties into the standardization process significantly complicated matters with regard to intellectual property rights. As the EC noted in COM(90) 456:

The problem of industrial and [IPRs] as well as patents has become a serious issue within the context of standardization. Inclusion of such elements within a standard can lead to reinforcement of a dominant position within the market unless satisfactory conditions for use of such property have been agreed. In many cases, the lack of adequate procedures to resolve such problems has slowed down work and hampered the convergence toward harmonized solutions.<sup>14</sup>

The EC urged standards bodies 'to develop practical rules' and to find 'adequate solutions and practical means to resolve IPR and patent issues.' In particular, the EC explained:

Whenever a contribution to a European standardization body is covered by IPR or patents, sufficient information should be provided to allow the experts at the working group level to base their opinion as to whether to include specifications covered by IPR or patent rights on the actual situation, including, when appropriate, the applicable licensing conditions. Public inquiry should be envisaged only if fair and reasonable conditions have been achieved and duly noted.<sup>15</sup>

The EC summarized this by concluding: 'The inclusion of IPR and patents within standards should be subject to clear rules, which provide for the right of use of IPR and patents either free or on fair and reasonable terms.'<sup>16</sup>

The original ETSI Directives issued in March 1988 did not include an IPR Policy.<sup>17</sup> On 16 December 1991, the EC published a follow-up (COM(91) 521 final) to the above-mentioned Green Paper on standards (COM(87) 290 final) in which it was stated (at paragraph xi) that the EC would welcome the development by standards bodies 'of clear conditions for the inclusion of [IPRs] in standards.' The EC added that, '[i]n view of the importance and complexity of the issue for

<sup>13</sup>ibid, paras 32, 21.

<sup>14</sup>European Commission (n 12), paras 92, 46.

<sup>15</sup>ibid.

<sup>16</sup>ibid, para V, s B (ix), 53.

<sup>17</sup>A proposal for an IPR Policy by the group of incumbent operators known as the GSM Memorandum of Understanding (MoU) 'that suppliers must grant operators a free worldwide license for all patents they held to implement GSM, and indemnify operators for all claims of patent infringement by third parties' was quickly rejected.' See Rudi Bekkers and Joel West, 'IPR Standardization Policies And Strategic Patenting In UMTS' (25th Conference on Entrepreneurship and Innovation, Copenhagen, June 2008).

[IPR], standardization, competition and trade policy, the EC intend[ed] to produce a separate communication on the subject.<sup>18</sup>

On 27 October 1992, the European Commission published its promised Communication on Intellectual Property Rights and Standardization (COM(92) 445 final). This Communication set forth ‘a number of principles which [the EC] believes should form the basis of any internal rules which standards bodies may wish to elaborate.’<sup>19</sup>

In COM(92) 445 final, the EC explained that in the event that the rightholder (i.e., patent holder) agrees to make licenses for SEPs available, ‘the terms for licenses must be fair, reasonable, and non-discriminatory.’ The EC did not elaborate on what the terms ‘fair and reasonable’ might mean and indeed the EC warned: ‘It is not feasible or appropriate to be more specific as to what constitutes ‘fairness’ or ‘reasonableness’ since these are subjective factors determined by the circumstances surrounding the negotiation.<sup>20</sup>

The EC also opined that: The terms which the rightholder offers for use of his rights should be flexible enough to include the possibility, if the parties agree, of cross-licensing arrangements.<sup>21</sup>

## 4 ETSI’s IPR Policy

ETSI’s first attempt at an IPR Policy—the 1993 ETSI IPR Policy and Undertaking—was approved by the ETSI General Assembly held between 16th and 18th March 1993. From the beginning, the fundamental objective of ETSI’s IPR Policy has been to enable the production and availability of telecommunication standards ‘based on solutions which best meet the technical objectives of the European telecommunications sector ....’<sup>22</sup> This is important. ETSI’s mandate was not to achieve agreement on an existing set of standards—such as deciding on which existing national standards should prevail in the whole common market—ETSI’s mandate was to produce new standards based on a set of commonly agreed technical objectives. This meant drawing from the best available existing technology and taking in new innovations, including technical solutions covered by patents and other IPR. ETSI standards and technical specifications were, from the beginning, expected to include solutions covered by patents and other IPRs (those of ETSI members and others).

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<sup>18</sup>European Commission, ‘Intellectual Property Rights and Standardization’ COM (92) 445 final, Brussels, s 1.1.2.

<sup>19</sup>ibid, s 1.1.4.

<sup>20</sup>EC (n 18), para 4.3.3.

<sup>21</sup>ibid, para 4.3.4.

<sup>22</sup>ETSI Directives, ‘ETSI Intellectual Property Rights Policy’ (*ETSI*, 1993) s 2.1.

There is an important distinction to be made between a Standards Setting Organization (SSO) and a Standards Development Organization (SDO). SSOs are primarily concerned with achieving interoperability (such as selecting a standard railway gauge, defining a unit of weight or measure, or mandating the use of certain radio frequencies). In contrast, an SDO such as ETSI is concerned both with achieving interoperability as well as the development of new technologies and solutions in order to achieve certain performance objectives. Unresolved IPR issues in SDOs can present significant hindrances to the production of new standards.

The 1993 ETSI IPR Policy and Undertaking was crafted to reduce the risk to ETSI, Members, and others applying ETSI Standards, that ‘investment in the preparation, adoption and applications of STANDARDS could be wasted as a result of an Essential IPR for a standard being unavailable’.<sup>23</sup> Patents incorporated into standards which are not available for license under any terms, or which were not available for license under FRAND terms and conditions would effectively block use of the standard frustrating the entire goal of standardization.

The 1993 ETSI IPR Policy also included an Undertaking which, beyond requiring that licenses granted ‘be non-exclusive, on fair, reasonable, and non-discriminatory terms and conditions’, imposed a list of items to be included in the scope of license and the disclosure of licensing terms, including ‘the maximum royalty rate it will demand for the grant of licenses...’.<sup>24</sup>

The attempt to define FRAND more specifically within the context of standardization was met with almost immediate opposition.

These and other arrangements gave rise to a complaint lodged on 22 June 1993 by the Computer and Business Equipment Manufacturers Association (CBEMA), most of whose members are also members of ETSI, alleging infringement of both Articles 85 and 86 resulting from ... the obligation to sign the undertaking which in CBEMA’s view amounted to a compulsory licensing scheme.<sup>25</sup>

The issues raised by the 1993 ETSI IPR Policy and Undertaking were never decided on formally by the EC, in view of the fact that the undertaking and any reference thereto in the policy were abandoned by ETSI’s General Assembly of 22 and 23 November 1994 in order to achieve greater consensus amongst ETSI members, and the complaint subsequently withdrawn.<sup>26</sup>

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<sup>23</sup>EC (n 18), ss 2.1.12, 4. ‘These economic objectives can, of course, only be realized insofar as standards are made known and available to the widest possible number of interested parties on fair and reasonable terms. Consequently, a standard is by definition a publicly-available document and the technical specification which is not available to all potential users is not a standard.’

<sup>24</sup>ETSI (n 22) Version 005.

<sup>25</sup>Articles 85 and 86 are the two fundamental provisions of European competition law as defined by the Treaty of Rome in 1957. These were renumbered as Articles 81 and 82 by the Treaty of Amsterdam in 1997, and renumbered once again to the present Articles 101 and 102 by the Treaty of the Functioning of the European Union (TFEU) ratified in 2007. Article 101 (formerly 85 and then 81) prohibits cartels and anticompetitive agreements; Article 102 (formerly 86 and then 82) prohibits the abuse of a dominant position.

<sup>26</sup>Official Journal of the European Communities No. C 76/5, Notice pursuant to Article 19(3) of Council Regulation No. 17 concerning case No. IV/35.006 – ETSI interim IPR policy, 28 March 1995.

ETSI itself found a solution before the EC could take action and the solution was to use, verbatim, the licensing conditions proposed by the EC in COM(92) 445 final.

The ETSI Interim IPR Policy approved by the ETSI General Assembly at its specially convened meeting held on 23 November 1994, in Nice, France abandoned the Undertaking and replaced it with Section 6.1 on the availability of licenses:

'6.1 When an ESSENTIAL IPR relating to a particular STANDARD is brought to the attention of ETSI, the Director of ETSI shall immediately request the owner to give within three months an undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable, and non-discriminatory terms and conditions under such IPR to at least the following extent:

MANUFACTURE, including the right to make or have made customised components and sub-systems to the licensee's own design for use in MANUFACTURE;

sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED;

repair, use, or operate EQUIPMENT; and

use METHODS.

The above undertaking may be made subject to the condition that those who seek licences agree to reciprocate.'

The language of Section 6.1 has proven to be durable. In the most current version of the ETSI IPR Policy (5 April 2017) is reproduced below with changes from the 1994 version in *italics*.

6.1 When an ESSENTIAL IPR relating to a particular STANDARD *or TECHNICAL SPECIFICATION* is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an *irrevocable* undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable, and non-discriminatory (FRAND) terms and conditions under such IPR to at least the following extent:

MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE;

sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED;

repair, use, or operate EQUIPMENT; and

use METHODS.

The above undertaking may be made subject to the condition that those who seek licences agree to reciprocate.

Since the 1993 Undertaking was abandoned, and the availability of licenses under FRAND governed by Section 6.1, ETSI has resisted all attempts to further define 'fair, reasonable, and non-discriminatory' beyond the plain, literal meaning of those words as they were handed down from the EC and placed into the ETSI IPR Policy.<sup>27</sup> The ETSI Guide on IPRs explains that 'commercial terms are a

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<sup>27</sup>Roger Brooks and Damien Geradin, 'Interpreting And Enforcing The Voluntary FRAND Commitment' (20 July 2010) International Journal of IT Standards and Standardization Research.

matter for discussion between the IPR holder and the potential licensee, outside of ETSI.’ members are reminded that ‘Specific licensing terms and negotiations are commercial issues between the companies and shall not be addressed within ETSI.’<sup>28</sup> The ETSI Guide on IPRs also reminds the chairs of technical bodies that ‘the Chairman shall not allow any discussion on commercial issues in the Technical Bodies, in particular but not limited to discussions on details of specific licensing terms and conditions.’<sup>29</sup> ETSI’s Guidelines for Antitrust Compliance reminds participants in ETSI Technical Committees and Working Groups to (please) not ‘Discuss any disclosure of licensing price or terms, product or service price or terms, pricing methods, profits, profit margins, cost data, production plans, market share or territories in the course of any ETSI activity.’<sup>30</sup> The Horizontal Guidelines state ‘where participation in standard-setting is unrestricted and the procedure for adopting the standard is transparent, standardization agreements which … provide access to the standard on fair, reasonable, and non-discriminatory terms will normally not restrict competition within the meaning of Article 101(1).’<sup>31</sup> It has to be remembered that ETSI consists largely of groups of competitors and ETSI’s own work is subject to the rules of competition law.<sup>32</sup> Moreover, in addition to having to comply with anti-competition guidelines, as a wholly practical matter ETSI’s technical working groups are ill-equipped to handle commercial licensing issues.

The EC’s view expressed in COM(92) 445 final that ‘It is not feasible or appropriate to be more specific as to what constitutes ‘fairness’ or ‘reasonableness’ since these are subjective factors determined by the circumstances surrounding the negotiation’ proved to be prophetic, practicable, and durable. The explanation is simple: FRAND promotes the work of standards bodies. FRAND may be an incomplete solution for the licensing of SEPs (as intended), but it is a complete solution to the problem of rapidly producing standards which incorporate SEPs and this is what many SEP users seem to take for granted. ETSI does not determine what FRAND is because this is expressly not the job of ETSI. ETSI’s job is to rapidly produce technically advanced standards which are available for public use.

When developing something as complex, large, ambitious and cutting-edge as a complete mobile telecommunications system, contentious commercial IPR licensing issues are unavoidable. The potential for commercial conflict arising from the protection of IPR implemented in products and services that comply with ETSI

<sup>28</sup>‘ETSI Guidelines On IPRs’ (ETSI, 2013) s 4.1.

<sup>29</sup>ibid, s 2.3.

<sup>30</sup>‘ETSI Guidelines For Antitrust Compliance’ (ETSI, 2011); ‘ETSI Directives Version 36’ (ETSI, 2016) <[https://portal.etsi.org/directives/36\\_directives\\_jun\\_2016.pdf](https://portal.etsi.org/directives/36_directives_jun_2016.pdf)>.

<sup>31</sup>‘Guidelines On The Applicability Of Article 101 Of The Treaty Of The Functioning Of The European Union To Horizontal Co-Operation Agreements’ (2011) C11/I-72, s 280.

<sup>32</sup>Regulation (EU) No. 1025/2012 of the European Parliament and Council of 25 October 2002’ (2012) L 316/12-33; ‘The European standardization organizations are subject to competition law to the extent that they can be considered to be an undertaking or an association of undertakings within the meaning of Articles 101 and 102 TFEU.’

standards is compounded by ETSI's large and heterogeneous membership,<sup>33</sup> but thanks to FRAND, the ETSI IPR Policy, and the resulting hands-off treatment of SEP licensing matters by ETSI as described above, SEP licensing issues do not themselves present any hinderance to the work of standards development. It is not difficult to imagine the chaos which would be introduced in the standardization process if the 'smartphone patent wars' were to be fought out during the process of standardization. In this regard, FRAND is a constructive ambiguity<sup>34</sup> which enables new standards to be peacefully developed and released on a rapid and regular basis leaving it to implementers, both licensors and licensees, of the standard to solve any commercial licensing issues once the standard is available for use. This is a feature of FRAND, not a flaw and this practical side of FRAND is the absolute keystone of the arch when it comes to producing high-quality standards in quick succession and getting goods and services available to consumers.

The success of the EC's creation of ETSI, its role in the development of ETSI's IPR Policy, and its limited intervention in defining FRAND is plainly evident. At the end of 1992, there were six million mobile subscribers in Europe.<sup>35</sup> In 2015, the GSMA reported 430 m unique mobile subscriptions across Europe and a total of 684 m connections (excluding M2M). The GSMA estimates that the whole ecosystem of the mobile communications industry contributed €500 bn to Europe's GDP in 2014 (3.2% of GDP), generated operator revenues in 2015 of €150 bn, provided 2.3 m direct jobs, and an additional 1.5 m indirect jobs. In terms of consumer benefit, the GSMA reported: 'Based on unique subscribers, Europe is the most penetrated region globally, with a near-saturation level of 78%, nearly 10 percentage points above both North America and CIS.'<sup>36</sup> At present, worldwide, there are nearly five billion unique mobile subscribers and over eight billion mobile connections (including M2M), producing annual revenues of \$1.06 T.<sup>37</sup> The World

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<sup>33</sup> 'Current Members' (ETSI) <<http://www.etsi.org/membership/current-members>>; ETSI today has over 800 members from 68 countries across five continents. 'Amongst our present members are the biggest players in ICT and there are many government and regulatory bodies. But ETSI is the home of small companies, universities and research bodies too. Size is unimportant because our members work together as partners in the standardization process.'

<sup>34</sup> Drazen Pehar, 'Use of Ambiguities in Peace Agreements' in J. Kurbalija and H. Slavik (eds), *Language and Diplomacy* (Malta 2001). 'Constructive ambiguity' is a term coined in the 1970s by former US Secretary of State Henry Kissinger to describe the negotiating tactic where ambiguous language is inserted into agreements in order to overcome an impasse so that further negotiations can take place.

<sup>35</sup> 'Annual Economic Report' (*European Telecommunications Network Operaror's Association*, 2012); N.B. ETNO's membership of 38 operators in 35 countries is larger than the expanded Union and includes Turkey, Switzerland, and Norway.

<sup>36</sup> 'The Mobile Economy Europe' (GSMA, 2015) <[https://www.gsma.com/mobileeconomy/archive/GSMAMEEurope\\_2015.pdf](https://www.gsma.com/mobileeconomy/archive/GSMAMEEurope_2015.pdf)>.

<sup>37</sup> 'Definitive data and analysis for the mobile industry' (GSMA Intelligence, 2018) <https://www.gsmaintelligence.com> accessed 10 May 2017.

Bank estimates that 96% of the world's population is covered by mobile radio services and globally there are 93 mobile cellular subscriptions per 100 people.<sup>38</sup>

## 5 Conclusion

The introduction of new generations of mobile standards has been rapid and relentless—and led from Europe. The world's first GSM (2G) call was made on 1 July 1991 in a European capital (Helsinki) using equipment supplied by Nokia. In 2001, the world's first voice call over WCDMA (3G) was made in the UK by Ericsson and Vodafone.<sup>39</sup> The world's first commercial LTE (4G) network was turned on in another European capital (Stockholm) in 2009 using equipment supplied by Ericsson.<sup>40</sup> As 3GPP noted about LTE (4G): 'Never before has a new radio technology made it to the market so quickly and widely after the finalization of the first version of the standards.'<sup>41</sup> In July 2016, the major European operators published a 5G manifesto which indicated a target of launching 5G in at least one city in each of the European member states by 2020.<sup>42</sup> Telecom Italia announced that the world's first nationwide 5G network will be installed in the micro-state of San Marino during 2018.<sup>43</sup> It is predicted that 5G networks will cover a third of the world's population by 2025.<sup>44</sup>

The primary goal of ETSI's IPR Policy has been the rapid creation and availability of new technical standards such as 2G, 3G, 4G, and 5G. In this regard, the ETSI IPR Policy—and in particular the FRAND licensing commitment—is a proven, durable and successful result of a sagacious public policy.

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<sup>38</sup>'World Development Indicators: Power And Communications' (*The World Bank*) <<http://wdi.worldbank.org/table/5.11>>; Of course, statistics on the number of subscriptions per capita do not account for people who have multiple phones, or a phone plus a tablet, eReader, or PC with a cellular connection.

<sup>39</sup>'Årsredovisning' (*Ericsson*, 2001): 'After having started production of commercial radio base stations in March, we completed the world's first successful call in the field using 3GPP release 99 in April in Vodafone's network'.

<sup>40</sup>'World's First 4GLTE Network Goes Live Today in Stockholm' (*Ericsson*, 2009) <<https://www.ericsson.com/en/press-releases/2009/12/1360881-worlds-first-4glte-network-goes-live-today-in-stockholm>>.

<sup>41</sup>Kevin Flynn, '3GPP System Standards Heading Into The 5G Era' (3GPP, 2018) <[http://www.3gpp.org/news-events/3gpp-news/1614-sa\\_5g](http://www.3gpp.org/news-events/3gpp-news/1614-sa_5g)>.

<sup>42</sup>'The Mobile Economy' (GSMA, 2017).

<sup>43</sup>Nic Fildes, 'San Marino Set To Become First Country Upgraded To 5G Nationwide' *Financial Times* (17 July 2017) <<http://mynoblog.com/san-marino-set-to-become-first-country-upgraded-to-5g-nationwide-financial-times/>>.

<sup>44</sup>*ibid.*

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# Chapter 5

## All Good Things Mustn't Come to an End: Reigniting the Debate on Patent Policy and Standard Setting



Ashish Bharadwaj, Manveen Singh and Srajan Jain

### 1 Introduction

The mobile evolution has transformed into a digital revolution. People around the world, along with hundreds of objects surrounding them, will be connected to networks as well as to one another, through significantly faster, more robust and secure wireless communications. A range of industrial sectors will ride on this transformative digital wave, from automotive, healthcare and energy, to urban infrastructure, agriculture and entertainment. To facilitate this inevitable change, reliable networks running on technology standards enabling them, will be needed. This brings to center stage the critical role of the patent system that incentivizes technology innovation, and the antitrust laws that ensure that market competition facilitating innovation is safeguarded. Therefore, compatibility and standardization are important for most internet-enabled and internet technology products and ser-

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vices which exhibit network effects. Often, the successful diffusion of these products is based on the emergence of a single standard.<sup>1</sup> Therefore, network externalities can be termed as guiding force behind the pathologies in standard setting.<sup>2</sup> On a fundamental level, standards are sets of technical descriptions and protocols of product features that enable interoperability.<sup>3</sup>

Interoperability is an important requirement for many products embedded with advanced technologies, to operate seamlessly across various users.<sup>4</sup> The last two decades have witnessed the exponential increase in the number of communication devices around the world, including smartphones, which has led to increase in the value of devices to each user.<sup>5</sup> Over the past two decades, consensus-driven associations have been developing interoperability standards, which work in partnership within the standard setting organization (SSO).<sup>6</sup> It is no secret that, these SSOs have played a key role in changing the landscape of the information and technology industry. They are tasked with the responsibility of fostering a regime of rapid technological innovation by balancing the interests of their members. Their membership comprising of standard essential patent (SEP) holders or licensors on one hand and implementers or licensees on the other. However, the composition of all the participants can vary greatly in size. While the SEP holders are involved in research and development (R&D), and look to maximize their earnings from licensing out their SEPs, the implementers look to seek licenses from SEP holders on terms that are fair, reasonable, and non-discriminatory (FRAND), in order to use the patented technology in the manufacturing of standard-compliant end-use products. However, at least in theory, an SEP holder can always engage in opportunistic behavior in order to charge extra royalty from the implementor for licensing the standard than the real worth of the standard at the time of creation of the standard by the SSO.<sup>7</sup> SSOs, such as the Institute of Electrical and Electronic Engineers Standards Association (IEEE-SA) aid in facilitating the interoperability of systems.<sup>8</sup> Published SSOs standards outline technical requirements that

<sup>1</sup>Nicholas Economides and Lawrence White, ‘One-Way Networks, Two-Way Networks, Compatibility, and Public Policy’ in David Gabel and David F. Weiman (eds), *Opening Networks To Competition: The Regulation and Pricing of Access* (Springer 1998).

<sup>2</sup>ibid 14–15.

<sup>3</sup>ibid 5.

<sup>4</sup>Ashish Bharadwaj and Manveen Singh, ‘A Single Spark can start A Prairie Fire: Implications of the 2015 Amendments to IEEE-SA’s Patent Policy’ (2018) 46(4) Capital University Law Review (forthcoming).

<sup>5</sup>Max Miceli, ‘Smartphones Are Taking Over the US’ (*US News & World Republic*, 30 October 2015) <<https://www.usnews.com/news/blogs/data-mine/2015/10/30/smartphones-are-taking-over-the-us>> accessed 24 March 2018.

<sup>6</sup>ICF, ‘Standards and Interoperability In Electric Distribution Systems’ (2016) US Department of Energy 7.

<sup>7</sup>Mark Lemley and Carl Shapiro, ‘Patent Hold-up and Royalty Stacking’ (2007) 85 Texas Law Review 1992.

<sup>8</sup>IEEE 2030-2011 (American National Standards Institute 2013); ANSI/IEEE 1420.1-1995 (American National Standards Institute 2002); IEEE 1849-2016 (American National Standards Institute 2018); The quantity of standards set forth just by the IEEE are extensive.

guarantee interoperability across and within devices that utilize the standardized technologies.<sup>9</sup> The success of a standard's implementation in the future is dependent upon the SSOs inclination to disclose and license their SEPs. In order to minimize the potential *ex-post* hold-up situation, the SSOs place themselves as a fundamental part of the standard setting process.<sup>10</sup> Therefore, the patent holders adequately disclose the licensing of their SEPs on FRAND terms.<sup>11</sup> The patent holders follow the patent policies developed by the SSO which require the participants to disclose all their SEPs during the process of standard development.<sup>12</sup> The policies are based on the operating performance and the impact in the market for standards, technologies, and products.<sup>13</sup> According to the policy for licensing, the patent holders are required to grant licenses of their SEPs to implementers on FRAND terms.<sup>14</sup> These commitments guarantee that implementers are able to obtain SEP licenses to sell their standards-compliant products under SEPs.<sup>15</sup>

The SSOs formed in the US are best considered 'quasi-formal' groups that are typically large, international organizations that 'share many of the characteristics of formally-recognized groups.'<sup>16</sup> Their significance is to enable virtually all products on which people depend in modern society to interoperate with one another and to consequently encourage informed consumer choice, higher efficiency, and further innovation. This takes the shape of essential products like communication equipment, telecommunication devices, electrical mechanisms and other mechanical systems to interoperate. SSOs, such as the IEEE-SA, the European Telecommunications Standards Institute (ETSI), and the International Telecommunications Union (ITU), facilitate this by developing and managing

<sup>9</sup>Patrick Curran, 'Standard-setting Organizations: Patents, Price Fixing, and Per Se Legality' (2003) 70 University of Chicago Law Review 983; 'Technical standards, and the SSOs that develop them, are a common and essential element of the modern economy. As early as 1987, more than four hundred standard-setting groups had developed approximately thirty thousand voluntary standards. Because standard setting requires particular expertise in specialized product areas, new SSOs are constantly forming to meet the needs of niche markets.'

<sup>10</sup>Josh Lerner, 'Patent Disclosures and Standard-Setting' (2016) 2 National Bureau of Economic Research, Working Paper No. w22768 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2851539](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2851539)>.

<sup>11</sup>ibid.

<sup>12</sup>Joseph Farrell, 'Standard Setting, Patents, and Hold-up' (2007) 74 Antitrust Law Journal 603.

<sup>13</sup>Neil Gandal and Pierre Regibeau, 'Standard Setting Organizations' in Panagiotis Delimatsis (ed), *The Law, Economics and Politics of International Standardization* (Cambridge University Press 2015) 394–395.

<sup>14</sup>ibid 609.

<sup>15</sup>Jorge Contreras, 'National Disparities and Standards Essential Patents: Considerations for India' in Ashish Bharadwaj, Vishwas H. Devaiah and Indranath Gupta (eds) *Complications and Quandaries In The ICT Sector* (ebook, Springer 2018) 1, 5 <[https://link.springer.com/chapter/10.1007/978-981-10-6011-3\\_1#citeas](https://link.springer.com/chapter/10.1007/978-981-10-6011-3_1#citeas)>.

<sup>16</sup>Jorge Contreras, 'Technical Standards, Standards-setting Organizations and Intellectual Property: A Survey of the Literature (with an Emphasis on Empirical Approaches)' in Peter S. Menell & David Schwartz (eds) *Research Handbooks on the Economics of Intellectual Property Law: Analytical Methods* (Edward Elgar 2017) 3 <<https://ssrn.com/abstract=2900540>>.

technical standards, which are essentially technical requirements for products implanted with patented inventions.<sup>17</sup> While standards themselves are not patentable, standard compliant products i.e. products manufactured in accordance with provided standards, ‘generally satisfy the statutory requirements for patent protection.’<sup>18</sup> The overarching objective of standards bodies is to ensure availability of standardized technologies to any implementer under licensing terms that vary across standards and standards bodies.

This chapter attempts to explain the details of amendments to the patent policy of IEEE-SA implemented in early 2015 in order to analyze the impact of these amendments on incentives for innovation and dissemination of innovation in essential technologies that are enabled by a well-functioning SSO. Broadly, the policy changes redefined the prevailing meaning and terms of how SEP licensing will be carried out. This includes the obligation set by IEEE that an SEP holder has to accept in the form of a Letter of Assurance (LoA), a promise to license its essential patents on FRAND terms to any implementer of a standard administered by IEEE.<sup>19</sup> Part one shall begin with a brief introduction to standard setting, followed by an explanation to importance of standard setting for the Information and Communications Technology (ICT) industry in part two. Part three discusses the WiFi standard and the developments that led to the IEEE-SA’s policy changes. Part four shall discuss the changes introduced by the 2015 policy, while placing emphasis on the core issues of royalty rates, injunctive relief, and reciprocal licensing, followed by the reactions to the revised policy from various stakeholders. Part five elucidates on the implications of the 2015 amendments, followed by the shift in US antitrust enforcement *vis-à-vis* SSO IPR policy in part six. Finally, part seven of the chapter presents the conclusion to the chapter.

## 2 Importance of Standards Setting

Standardization is set through two main mechanisms: the explicit co-ordination of product designs around generally agreed technological measurements, and the *de facto* market dominance of a particular technology.<sup>20</sup> Standards in technology has various purposes, ‘including reducing product variety, maintaining product quality and performance, measurement, codifying knowledge, assuring compatibility, articulating a vision of the industry, assuring health and safety, and controlling

<sup>17</sup>ibid; ‘About ETSI’ (ETSI) <<http://www.etsi.org/about>>; ‘About International Telecommunication Union’ (ITU) <<https://www.itu.int/en/about/Pages/default.aspx>>.

<sup>18</sup>Contreras (n 16) 8.

<sup>19</sup>Art MacCord, ‘Standard Essential Patents: The IEEE Approach’ *IEEE Power Electronics Magazine* (September 2015) 10; the patent holder can alternatively circumvent by declining to submit an LoA or submitting a negative LoA expressing their noncommitment to license SEPs.

<sup>20</sup>Justus Baron and Daniel Spulber, ‘Technology Standards and Standards Organizations: Introduction to the Searle Centre Database’ (2015) 3 Northwestern Law & Economic Research Paper No. 17-16 <[http://www.law.northwestern.edu/research-faculty/searlecenter/innovationeconomics/documents/Baron\\_Spulber\\_Searle%20Center\\_Database.pdf](http://www.law.northwestern.edu/research-faculty/searlecenter/innovationeconomics/documents/Baron_Spulber_Searle%20Center_Database.pdf)>.

environmental quality.<sup>21</sup> In order to witness the success of standards, implementers must have access to patented technologies in which they receive returns on their investments. Patent holders deserve a market reward, without which they are unlikely to further invest in future innovation and future standards setting.

There are two types of patents in standardization- minor or non-essential patents, and essential patents. The minor or non-essential patents relates to the technology, for which an alternative exist.<sup>22</sup> On the other hand, it is not possible to bypass the essential patent because they require the operation of a standard in order to function.<sup>23</sup> Much like patents, there are two types of disclosures: generic and specific. The former relates to cost containment and therefore the need for thorough patent search is avoided.<sup>24</sup> Whereas, the latter i.e. specific disclosures are required to disclose all the relevant Intellectual Property (IP) because they invite concerns about antitrust claims.<sup>25</sup> ‘If the firm neglects to include all IP that could be relevant, even if the omission was unintentional, the firm may be vulnerable to antitrust claims if it seeks to enforce its patent portfolio.’<sup>26</sup> Unlike the case for specific disclosures, generic disclosures guarantee ‘that all relevant patents will be available on FRAND terms.’<sup>27</sup> The challenge lies with valuing the patented technologies. Scholars have argued that government intervention is required on the grounds that clarity is required with respect to the meaning of FRAND.<sup>28</sup> There is a need for government intervention through policy recommendations.<sup>29</sup> In order to improve the standards setting process, transparency should be made viable by either the standards developing organizations (SDOs) or the regulators. Until a transparent system is in place, the implementers may continue to face challenges in identifying the parties from whom they must seek the SEP.<sup>30</sup>

The process of licensing all the patents going into a standard is remarkably complex. The main issue in the context of standards setting is that of collective adoption defects or collective action. Theoretically, adoption of products which has

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<sup>21</sup>ibid 1.

<sup>22</sup>Lerner (n 10) 8.

<sup>23</sup>ibid.

<sup>24</sup>ibid 6.

<sup>25</sup>ibid.

<sup>26</sup>ibid.

<sup>27</sup>ibid 6–7.

<sup>28</sup>David Teece and Edward Sherry, ‘The IEEE’s New IPR Policy: Did the IEEE Shoot Itself in the Foot and Harm Innovation?’ (2016) Tusher Center for the Management of Intellectual Capital Working Paper Series No. 13, 6. <<http://businessinnovation.berkeley.edu/wp-content/uploads/2014/07/Tusher-Center-Working-Paper-No.-13.pdf>>.

<sup>29</sup>European Commission, ‘Communication from the Commission on Standards Essential Patents for a European digitalised economy’ COM (2017) 712 final <[https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-1906931\\_en](https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-1906931_en)>.

<sup>30</sup>Kirti Gupta and others, ‘Highlights and Economic Analysis’ (IP LeadershiP, Brussels, 2017) <<https://www.competitionpolicyinternational.com/wp-content/uploads/2017/11/CPI-Gupta-Wong-Ervin-Coniglio-Naegele.pdf>>.

interoperability issues are prone to the collective action problems such as excess inertia, where a prevailing standard which requires to be displaced is not displaced because of user commitments and path dependency. Further, excess momentum, which takes place when an old standard is not sustained or maintained due to other alternatives also hinders the adoption of products which exhibit network externalities. These collective action issues, in the existence of network externalities, are mainly the result of spillovers across users that are not essentially internalized correctly. The collective interest of the standards implementers gives way to the private interest of the SEP holders and there is a potential likelihood of the latter being able to exploit its position to extract more favorable rate of royalties *ex-post*, due to the vagueness of FRAND terms. This phenomenon is commonly referred to as ‘patent hold-up’ and has led to calls for a more precise definition of FRAND in the IPR policies of SSOs.

Most SSOs require their members to license patents essential to the implementation of the standard, i.e., the SEPs, on FRAND terms. The problems of potential anticompetitive harm are addressed by FRAND commitments.<sup>31</sup> These commitments reflect an *ex-ante* competitive commitment by the SEP holder to the implementer of the standard.<sup>32</sup> This gives SEP holders the ability to engage in ‘hold-up’ and *ex-post* market power.<sup>33</sup> Shapiro has said that ‘[t]he need to navigate the patent thicket and hold-up is especially pronounced in industries such as telecommunications and computing in which formal standard setting is a core part of bringing new technologies to market.’<sup>34</sup> Therefore, once the technology involving patents is locked into a standard and investments towards the development of standard compliant products have been made, working around the technology, or switching over to an alternative may become difficult for the technology implementers, leading to an increase in the bargaining power of the SEP holders. However, this area of contention has been the theory and empirical evidence of hold-up are at odds with each other, due to there being almost no empirical evidence of hold-up, since the very inception of the term in the context of standardization. Claims that SEP holders abuse their market position has been found to lack empirical rigor, which fails to establish patent hold-up as an institutional practice that needs a regulatory correction. Recent scholarly work, including research done by Stephen Haber, Alexander Galetovic and Ross Levine suggests that the concept of patent hold-up is based on an incorrect or fallacious understanding of the

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<sup>31</sup>Janusz Ordover and Allan Shampine, ‘Implementing the FRAND Commitment’ (2014) 14(1) Antitrust Source 1 <[https://www.americanbar.org/content/dam/aba/publishing/antitrust\\_source/oct14\\_full\\_source.authcheckdam.pdf](https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct14_full_source.authcheckdam.pdf)>.

<sup>32</sup>*ibid.*

<sup>33</sup>*ibid.*

<sup>34</sup>Carl Shapiro, ‘Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting’ (2001) 1 Innovation Policy and the Economy 119.

underlying economic principles in the domain of SEP markets.<sup>35</sup> The stakeholders around the world have failed to point out to any solid evidence of market failure and instead, there has been a tendency to draw conclusions based on merely few examples of abuse to support broad regulations with no or little attention given to the potential adverse impacts.<sup>36</sup> When implementers fail to undertake investment in R&D of new technologies or make commercial use of the existing technology without proper licenses, the entire ecosystem of innovation and technological progress comes under stress. An excessive scrutiny of the actions of SEP holders in the past few years has resulted in the imposition of unilateral good faith obligations on the SEP holders, while the implementers enjoy lower liability to comply with FRAND terms in such patent licensing contracts.

However, there exists concerns that specific SEP holders may look to prohibit rivals from pertinent downstream markets by either imposing discriminatory terms or declining to license the IP which is important for the practice of the standard.<sup>37</sup> Further, it is asserted that few SEP holders are likely to abuse their additionally gained market power by including their IP in the standard to charge inordinate prices.<sup>38</sup> The last two decades has witnessed a substantial increase in the number of patents covering standardized technologies which has led to alleged threats of stacking and patent hold-up and thus a sequence of policy measures have been proposed to address these issues.<sup>39</sup> Therefore, one would be led into believing that bargaining power is concentrated in the hands of technology developers, with none lying with the technology implementers. However, there is also a possibility of opportunistic conduct on behalf of technology implementers in the form of ‘reverse hold-up’ or ‘hold-out’. ‘Reverse hold-up’ or ‘hold-out’ situations arise on the refusal of technology implementers to pay royalties to SEP holders at a reasonable rate, after the standard has been set and significant R&D costs have been incurred by the SEP holders. Since it is obligatory on the part of licensors to charge royalties based on FRAND terms, even on successful litigation by the SEP holders, the maximum royalties recovered from licensees are, what they would have paid to the licensors in the first place, had they not indulged in hold-out. In such a scenario, one would like to believe that there is a significant incentive for technology implementers to hold-out and refuse to pay royalties to the SEP holders. In order to get

<sup>35</sup>Alexander Galetovic and Stephen Haber, ‘The Fallacies of Patent- Hold-up Theory’ (2017) 13 (1) Journal of Competition Law & Economics 1; Alexander Galetovic, Stephen Haber and Ross Levine, ‘An Empirical Examination of Patent Hold-up’ (2015) 11(3) Journal of Competition Law & Economics 549.

<sup>36</sup>Anne Layne-Farrar, ‘Patent Hold-up and Royalty Stacking Theory and Evidence: Where Do We Stand After 15 Years of History?’(2014) OECD DAF/COMP/WD (2014) 84.

<sup>37</sup>Roberto Grasso, ‘Selected Issues in SEP Licensing in Europe: The Antitrust Perspective’ in Ashish Bharadwaj, Vishwas H. Devaiah and Indranath Gupta (eds), *Complications and Quandaries In The ICT Sector* (ebook, Springer 2018) 79–81 <[https://link.springer.com/chapter/10.1007/978-981-10-6011-3\\_1#citeas](https://link.springer.com/chapter/10.1007/978-981-10-6011-3_1#citeas)>.

<sup>38</sup>*ibid.*

<sup>39</sup>Contreras (n 16) 5.

returns on its investment, the SEP holder will either have to litigate to obtain any royalties or simply give up on the royalties and let the implementer freeloading on their SEPs. Such a behavior on the part of implementers has been duly recognized by antitrust agencies globally.<sup>40</sup> The issue lies in there being no definite definition of FRAND, as SSOs have disclaimed their role in interpreting, adjudicating or establishing boundaries of FRAND licensing terms.<sup>41</sup> This lack of conviction has led to recent litigation over FRAND commitments and thus it has contributed to leaving the details of licensing arrangements over to bilateral negotiations among the potential licensees and patent holders.<sup>42</sup> In order to successfully implement the standard, the implementers are required to have access to patented technologies for which they receive returns on their investments. The patent holders who have invested in the development of the IP deserve a market reward, without which they are unlikely to further invest, and contribute innovative technologies to future standard developing process.

### **3 IEEE-SA 2015 IPR Policy Change and the WiFi Standard**

#### ***3.1 Importance of 802.11 (The WiFi Standard)***

A considerable number of standards for wireless telecommunications were developed under coordination of the IEEE-SA platform.<sup>43</sup> The set of specifications for WiFi chipset that enables interoperability of electronics connected via wireless network can also be referred as IEEE 802.11 WLAN standard.<sup>44</sup> IEEE-SA Standard 802.11 is the main WiFi standard that has a dedicated long list of companies that have vowed their patents to be utilized in the development and utilization of the standard.<sup>45</sup> The procedure of asking for guarantees from SEP holders and

<sup>40</sup>Richard Epstein and Kavyan Noroozi, ‘Why Incentives for ‘Patent Hold-out’ Threaten to Dismantle FRAND and Why it Matters’ (2017) Berkeley Technology Law Journal.

<sup>41</sup>Jorge Contreras, ‘A Brief History of FRAND: Analysing Current Debates in Standard Setting and Antitrust Through a Historical Lens’ (2015) 80 Antitrust Law Journal 39.

<sup>42</sup>*ibid.*

<sup>43</sup>Nicolo Zingales and Olia Kanewskaia, ‘The IEEE-SA patent policy update under the lens of EU competition law’ (2016) 12(2–3) European Competition Journal 195.

<sup>44</sup>IEEE 802.11tm Wireless Local Area Networks The Working Group for WLAN Standards <<http://www.ieee802.org/11/>>.

<sup>45</sup>‘Response of Cisco Sys., Hewlett-Packard Co., Int’l Bus. Machs. Corp., & Research in Motion Ltd. to FTC Request for Comment on Standard-Setting Issues’ (*Federal Trade Commission*, 1 August 2011) <[https://www.ftc.gov/sites/default/files/documents/public\\_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00035%C2%A0/00035-80135.pdf](https://www.ftc.gov/sites/default/files/documents/public_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00035%C2%A0/00035-80135.pdf)>.

standard's subsequent upgrades are detailed on IEEE-SA's website.<sup>46</sup> The written guarantee given by each SEP holder, called a Letter of Assurance (LoA), enumerates the terms on which the patent is committed to the SSO.<sup>47</sup> Figure 1 (Total number of individual companies making declarations to IEEE for 802.11 WiFi Standard) depicting the number of companies that have pledged their patents to IEEE for the development of 802.11 WiFi standard. The graph indicates that there is a substantial rise in both negative LoAs and in missing LoAs where the IEEE did not receive an LoA in response. There is an 83% decline in the net average supply rate of nonduplicate LoAs for the IEEE 802.11 k and h standards.<sup>48</sup>

The IEEE-SA within its regulatory framework develops a set of rules that ensures standard-setting activity is guided by minimum procedural safeguard.<sup>49</sup> The IEEE-SA standards development stage which includes the proposal to standardize, approval of a standard, defining the technical conditions of the standard etc. are guided by openness, due process, balance and right of appeal.<sup>50</sup>

However, a substantial number of IEEE-SA members who had pledged their patented technology for the development of high value standards raised disapprovals to the substance of the proposed amendments and expressed their objections for the manner in which the process of forming the new policy took place.<sup>51</sup> This strong opposition came from key patented technology developers such as Qualcomm, Nokia, Ericsson, GE, IBM etc. These key patent developers contributed an aggregate of 45% of all IEEE declared SEPs in 2007–2013 and further contributed an aggregate of 36% of all IEEE LoA during 2007–2013.<sup>52</sup> The 'Other' companies accounted for about 64% of rest of the SEPs. The graphical representation of fraction of IEEE LoAs contributed in 2007–2013 has been produced

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<sup>46</sup>‘Submitting a Project Request’ (IEEE-SA) <<http://standards.ieee.org/develop/par.html>>.

<sup>47</sup>‘Sample Letter of Assurance for Essential Patent Claims’ (IEEE-SA) <<https://development.standards.ieee.org/myproject/Public/mytools/mob/loa.pdf>>.

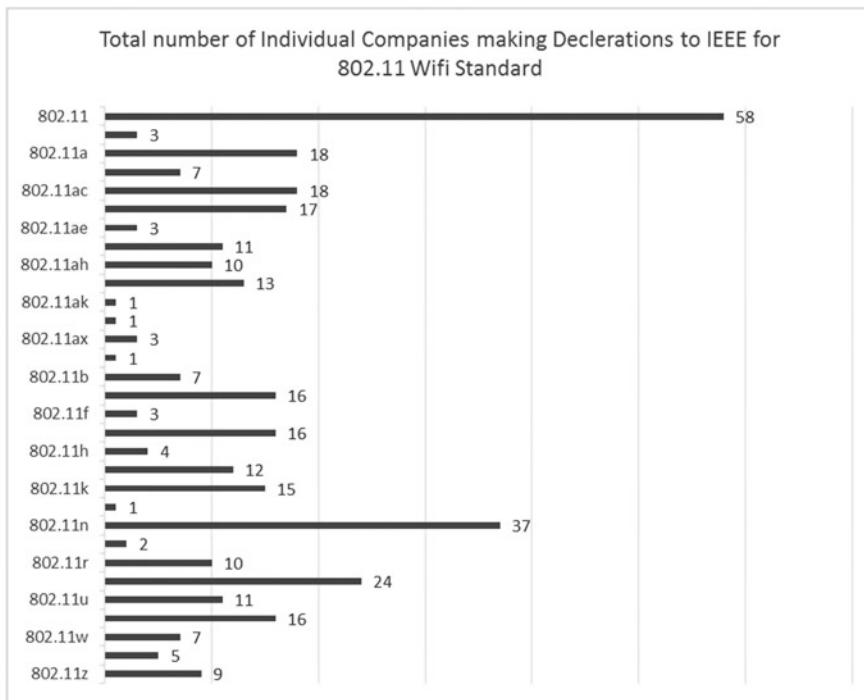
<sup>48</sup>ibid.

<sup>49</sup>Zingales (n 43).

<sup>50</sup>Standards Board Bylaws, art 2.1, 5.3.3, ‘IEEE-SA Standards Board Operations Manual’ (IEEE-SA, December 2015) <[http://standards.ieee.org/develop/policies/opman/sb\\_om.pdf](http://standards.ieee.org/develop/policies/opman/sb_om.pdf)>.

<sup>51</sup>Email from Qualcomm, Nokia, NSN, & BlackBerry to the Members of the SASB’ (Email) (IEEE, 9 June 2014) <<http://grouper.ieee.org/groups/pp-dialog/email/msg00287.html>>; (describing that the deliberations of the Patent Committee Ad Hoc were not open to non-members and there was no public announcement of any vote taken by the Ad Hoc, but that they did receive a number of comments and responded to them). The email known as the ‘Four Company Letter’ lays out grievances on behalf of Qualcomm, Inc., Nokia Solutions, Networks Oy, Nokia Oy, and BlackBerry Ltd. and illustrates, in their view, how the policy and its formation was wholly inconsistent with the SASB’s principles of ‘consensus, due process, openness, and balance.’

<sup>52</sup>Ron Katzenbach, ‘The IEEE Controversial Policy on Standard Essential Patents: The Empirical Record Since Adoption’ (Symposium on Antitrust, Standard Essential Patents, and the Fallacy of the Anticommons Tragedy, Berkeley, California, 29 October 2016) <<https://works.bepress.com/rkatzenbach/80/>>.



**Fig. 1** Total number of individual companies making declarations to IEEE for 802.11 WiFi Standard. *Source:* Authors' calculations based on IEEE-SA Standards Board (PatCom) records of letters of assurance for IEEE standard 802.11 and amendments ('IEEE 802.11 and Amendments Patent Letters of Assurance' (IEEE-SA) <[http://standards.ieee.org/about/sasb/patcom/pat802\\_11.html](http://standards.ieee.org/about/sasb/patcom/pat802_11.html)>)

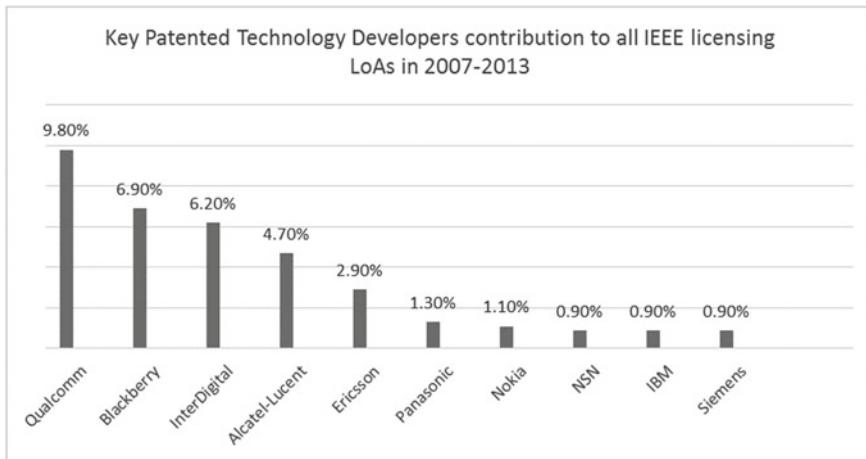
hereinbelow in Fig. 2 (Key Patented Technology Developers contribution to all IEEE licensing LoAs in 2007–2013).<sup>53</sup>

Among the many issues and complaints raised by the critics of the policy, was the arrangement of the committee not taking account of the interests of the patent owners and most of their suggestions and comments were not considered.<sup>54</sup> Rather, the amendment to the policy was used by some of the major technology implementers to accommodate their own commercial interests, and any involvement on the part of patent holders was left to the final stages of the standardization process.<sup>55</sup>

<sup>53</sup>ibid.

<sup>54</sup>Email (n 51); they express their view that the basic principles of due process were not adhered to. They complained that the consensus—the bedrock of the standard-setting process of IEEE technical standards—was missing from the deliberations and formulation stage of the new policy.

<sup>55</sup>ibid.



**Fig. 2** Key patented technology developers contribution to all IEEE licensing LoAs in 2007–2013. Source Ron Katzenbach, ‘The IEEE controversial policy on Standard Essential Patents the empirical record since adoption’

### 3.2 *Developments Leading to the IEEE-SA’s IPR Policy Change*

In 2015, IEEE revised its policy and became the first SSO in the world to establish regulation of FRAND royalties. In a post *Rambus* world, the US courts have necessarily enforced FRAND commitments between SEP holders and implementers to avoid opportunistic behavior by parties.<sup>56</sup>

The patent policy was a series of important developments that eventually led to the changes to the patent policy being implemented by IEEE. It started off with the IEEE’s attorney highlighting the insufficiency of the 2007 patent policy in dealing with the problem regarding the vagueness of FRAND—especially since the SEP holders had only twice made use of the opportunity to disclose the most restrictive terms—out of a possible forty occasions in which an LoA committing to license on FRAND terms was issued.<sup>57</sup> This was followed by the Board of Governors of IEEE-SA giving its approval to the changes in December 2014.<sup>58</sup> Finally, in February 2015, the Antitrust Division of the US in a Business Review Letter sent by the Department of Justice (DOJ) to the IEEE, communicated their intent to not

<sup>56</sup>Ericsson Inc. v D-Link System Inc. (2014) Federeal Circuit, 773 F.3d 1201, 1231; Microsoft Corp. v Motorola Inc. (2015) 9th Circuit, C-14-35393 (citing Microsoft Corp. v Motorola, Inc. (2013) W.D. Wash No. 11 C 9308, 2013 WL 2111217, 2).

<sup>57</sup>Zingales (n 43) 21–22.

<sup>58</sup>‘Board of Governors Resolutions’ (IEEE-SA) <<https://standards.ieee.org/about/bog/resolutions.html>>.

challenge the proposed patent amendments.<sup>59</sup> The IEEE has asked for Business Review Letter because of concerns raised by few members with respect to the policy changes in addition to the procedure that was followed by IEEE-SA to draft and approve the amendments, thereby raising concerns of antitrust investigation of the organization.<sup>60</sup> Apparently, the DOJ seemingly based its inference regarding the policy changes resulting in ‘pro-competitive effects on policy preferences rather than a careful rule of reason analysis’.<sup>61</sup>

Thus, on 8 February 2015, the Standards Board, the Board of Directors, the Board of Governors, and the Patent Committee (PatCom) of the IEEE, voted to approve the amendments to the patent policy of IEEE-SA.<sup>62</sup> The updates to IEEE-SA went into effect on 15 March 2015 and received a lot of feedback and criticism.<sup>63</sup> The updates see, *inter alia*, essentially decreased royalty fees from large manufacturers especially in the ICT sector, and compensation for a company’s IP was no longer corresponded on the value of the end device, but instead on a percentage of the price of the component that is patented.<sup>64</sup> This re-examined approach to calculate royalties is viewed as a realistic and practical approach to define FRAND licensing as it pertains to SEPs, to an extent that the innovators get a fair return for their sizable investment in the development of innovation, while taking into account easy entry for new suppliers and new products.<sup>65</sup> However, some proponents of the update are of the opinion that it could possibly hinder

<sup>59</sup>Response to Institute of Electrical and Electronics Engineers, Incorporated’ (*US Department of Justice*, 2 February 2015) <<http://www.justice.gov/atr/public/busreview/311470.html>>.

<sup>60</sup>Letter from Michael Lindsay, Esq., Dorsey & Whitney LLP, on behalf of IEEE, to Hon. William Baer, Assistant Attorney General US DOJ (30 September 2014) <<https://www.justice.gov/sites/default/files/atr/legacy/2015/02/17/311483.pdf>>; (requesting a business review letter pursuant to the Department’s business review procedure, 28 C.F.R. s 50.6).

<sup>61</sup>Stuart Chemtob, ‘Carte Blanche for SSOs?: The Antitrust Division’s Business Review Letter on the IEEE’s Patent Policy Update’ (March 2015) 1 Competition Policy International Antitrust Chronicle 2 <<https://www.wsgr.com/publications/PDFSearch/chemtob-0315.pdf>>; (The DOJ’s devaluing of concerns about harm to innovation incentives has serious implications that will affect the choices made by other SSOs, as well as enforcement policies of foreign competition authorities looking to US antitrust law for guidance on the proper relationship between antitrust laws and IP laws).

<sup>62</sup>Rudi Bekkers, ‘Concerns and Evidence for Ex-post Hold-up with Essential Patents’ (2015) Eindhoven University of Technology, Working Paper <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2663939](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2663939)>.

<sup>63</sup>ibid; Benjamin Li, ‘The Global Convergence of FRAND Licensing Practices: Towards ‘Inoperable’ Legal Standards’ (2016) 31 Berkeley Technology Law Journal 429 (discussing the mixed reviews received by the new policy); Deepa Sundararaman, ‘Inside the IEEE’s Important Changes to Patent Policy’ (*Law* 360, 3 April 2015) <<https://advance.lexis.com/api/permalink/3ca3eb00-8a2a-4ebb-b031-53e17586f8be/?context=1000516>> accessed 24 March 2018 (discussing the split reactions of patent holders). The author notes that the policy has support from some large technology companies while large companies on the other side argue that the ‘changes go too far.’

<sup>64</sup>ibid 463.

<sup>65</sup>Sundararaman (n 63).

innovation.<sup>66</sup> The antitrust division of the US DOJ absolutely failed to check, and, in fact, blessed the amendments made by IEEE to its by-laws that include policies that govern use of patents in IEEE standards. These amendments seek to reduce the royalty rates demanded by SEP holders in addition to diminishing the ability of SEP holders to enforce their patent rights. The antitrust division, applauding the efforts of the IEEE, entirely ignored the possible effects of these amendments that may potentially facilitate collusion among implementers.<sup>67</sup> The amendments seem to have addressed certain ambiguities, yet created a potential to lower the leverage for patent owners by undermining their patents, which can potentially lead to an explosion of litigation. It appeared that the ad hoc committee in charge of drafting the policy changes met in closed sessions and sought remarks and comments on the draft from members.<sup>68</sup>

## 4 Key Changes and Reactions to the IPR Policy Amendments

### 4.1 Key Changes to the IEEE IPR Policy

The 2015 IEEE-SA patent policy significantly changed the meaning of FRAND. Among the many amendments, the core amendments sought to waive the right of injunction from the SEP holder until the SEP holder has successfully litigated the claim of infringement against the unlicensed implementor in the court of appeals. Another major amendment was made in relation to the royalties based on ‘smallest saleable’ implementation of any portion of the standard. Further, the SEP holders were also made to agree to not require reciprocal cross-licensing except of the same standard. Hereinbelow, the authors will discuss the changes brought by the policy with special reference given to the core issues, i.e. royalty rates, injunctive relief and reciprocal licensing.

#### 4.1.1 Royalty Rate

Article 6.1 of the IEEE’s IP policy defines the term ‘compliant implementation’ as ‘any product (e.g., component, sub-assembly, or end-product) or service that conforms to any mandatory or optional portion of a normative clause of an IEEE

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<sup>66</sup>Li (n 63) 463–464; *ibid.*

<sup>67</sup>Bharadwaj (n 4).

<sup>68</sup>Email from Qualcomm, Nokia, NSN and Blackberry to the Members of the SASB (9 June 2014) <<http://grouper.ieee.org/groups/pp-dialog/email/msg00287.html>> (describing that the deliberations of the Patent Committee Ad Hoc were not open to non-members and there was no public announcement of any vote taken by the Ad Hoc, but that they did receive a number of comments and responded to them).

Standard.<sup>69</sup> Therefore, it takes into account the product components and other sub-assemblies as products for the purpose of standard-compliant implementation.<sup>70</sup> The amended policy defines ‘reasonable rate’ as follows:

Reasonable Rate shall mean appropriate compensation to the patent holder for the practice of an Essential Patent Claim excluding the value, if any, resulting from the inclusion of that Essential Patent Claim’s technology in the IEEE Standard. In addition, determination of such Reasonable Rates should include, but need not be limited to, the consideration of:

- The value that the functionality of the claimed invention or inventive feature within the Essential Patent Claim contributes to the value of the relevant functionality of the smallest saleable Compliant Implementation that practices the Essential Patent Claim.
- The value that the Essential Patent Claim contributes to the smallest saleable Compliant Implementation that practices that claim, in light of the value contributed by all Essential Patent Claims for the same IEEE Standard practiced in that Compliant Implementation.
- Existing licenses covering use of the Essential Patent Claim, where such licenses were not obtained under the explicit or implicit threat of a Prohibitive Order, and where the circumstances and resulting license are otherwise sufficiently comparable to the circumstances of the contemplated license.<sup>71</sup>

Instead of leaving the parties with liberty to calculate the royalties, with this policy change, the IEEE, endorses a royalty calculation method based on the value of the chipset, despite knowing the fact that there is a possibility of several other functions of the device using the contributed technology.<sup>72</sup> This change in the method of calculation of the royalty base is a derivation from the Smallest Saleable Patent Practicing Unit (SSPPU) concept, that is widespread predominantly in the US<sup>73</sup> and is indeed a severely disputed rule as the new rule *vis-à-vis* royalties would lead to a reduced royalty being paid by large manufacturers, especially in the wireless sector.<sup>74</sup> However, the IEEE’s endorsement of the smallest saleable

<sup>69</sup>IEEE-SA Standards Board Bylaws, s 6.1 (IEEE 2017) <[http://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](http://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf)>.

<sup>70</sup>Sai Deepak, ‘Standard essential Patents: Comparing IP Rights Policies’ (*International Law Office*, 29 February 2016) <<http://www.internationallawoffice.com/Newsletters/Intellectual-Property/International/Saikrishna-Associates/Standard-essential-patents-comparing-IP-rights-policies>>.

<sup>71</sup>IEEE-SA Standards Board Bylaws (n 69).

<sup>72</sup>Bill Merritt, ‘Why We Disagree with the IEEE’s Patent Policy’ (*EE Times Blog*, 27 March 2015) <[http://www.eetimes.com/author.asp?doc\\_id=1326144](http://www.eetimes.com/author.asp?doc_id=1326144)>.

<sup>73</sup>Anne Layne-Farrar, ‘The Practicalities and Pitfalls of the Smallest Saleable Patent Practicing Unit Doctrine: A Review of Teece and Sherry’ (2016) 4 *Les Nouvelles- Journal of the Licensing Executives Society* <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2855148](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2855148)>.

<sup>74</sup>John Walko, ‘IEEE Waves Through Controversial Patent Policy’ (*EE Times Blog*, 17 February 2015) <[http://www.eetimes.com/author.asp?section\\_id=36&doc\\_id=1325706](http://www.eetimes.com/author.asp?section_id=36&doc_id=1325706)>.

compliant implementation lacks lustre, since the concept of SSPPU was implemented in the US in order to avoid undue bias and jury disarray in jury trials.<sup>75</sup> It has been described as ‘a ‘term of art’ that was developed through judicial decision in patent infringement cases in the US.’<sup>76</sup> The jury in such cases weighed several competing and prospective patent valuation techniques (for the infringed patent) to arrive at SSPPU as one way to assign a value to a patent.<sup>77</sup> Moreover, the SSPPU model is not a prevalent rule in the US, as has been emphasized in many cases in the past; one of them being *Ericsson v D-Link*, wherein the Federal Circuit held the licenses to be negotiated without taking into account any consideration of the entire-market-value rule (EMVR) or the SSPPU model and rather adhering to comparable licenses based on the value of the end product.<sup>78</sup> The *Ericsson* case follows the rule laid down in *Virnetx Inc. v Cisco Systems*<sup>79</sup> with respect to the royalty rate.<sup>80</sup> It was held that ‘though there were undoubtedly differences between the licenses at issue and the circumstances of the hypothetical negotiation, the jury was entitled to hear the expert testimony and decide for itself what to accept or reject.<sup>81</sup> The ultimate advantage resulting from a patent and the reasonableness of the licensing terms is majorly dependent on the specificity of the patent and the product to be licensed rather than the smallest saleable value derived from the end product.<sup>82</sup>

It is highly improbable for the baseband component to carry the value of all the essential patents. Few courts around the world have ruled out that the baseband component is able to capture most of the essential features, while on the other hand, other courts have ruled that the value of the SEP far exceeds the value baseband

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<sup>75</sup>Keith Mallinson, ‘Free and Fair Trade in IP Would Be Crushed by Compulsory Chip-based SEP Licensing’ (*IP Finance Blog*, 9 September 2016) <<http://www.wiseharbor.com/pdfs/Mallinson%20licensing%20based%20on%20device%20or%20SSPPU%2009Sept2016.pdf>>.

<sup>76</sup>ibid.

<sup>77</sup>ibid; Mallinson states that in a typical patent infringement case, where only a handful of patent rights are at issue and the scope of the claims of each patent is defined by the court, it might be possible to establish the value of SSPPU. However, it is not a substitute for how a patent licensor and licensee value an entire portfolio of patents. Mallinson claims that SSPPU ‘ignores realities of licensing’, and even if it is applied, in value terms, it would eventually come close to the value of the entire device.

<sup>78</sup>*Ericsson* (n 56); David Long, ‘Federal Circuit Gives Guidance on Litigating RAND Royalty (*Ericsson v. D-Link*)’ (*Essential Patent Blog*, 5 December 2014) <<https://www.essentialpatentblog.com/2014/12/federal-circuit-gives-guidance-on-litigating-rand-obligation-ericsson-v-d-link/>>.

<sup>79</sup>*Virnetx Inc. v Cisco Systems* (2014) Federal Circuit, 767 F.3d 1308.

<sup>80</sup>David Long, ‘Patent Case: Federal Circuit Provides Guidance on Damages That Eschews Use of Nash Bargaining Solution (*Virnetx v Cisco*)’ (*Essential patent Blog*, 17 September 2014) <<http://www.essentialpatentblog.com/2014/09/patent-case-federal-circuit-provide-damages-guidance-that-eschews-use-of-nash-bargaining-solution-virnetx-v-cisco/>>.

<sup>81</sup>*Virnetx* (n 79) 1331.

<sup>82</sup>ibid 1327.

components.<sup>83</sup> Further, many of the essential features have never been litigated and there is nothing available on public record to ascertain their value. Using the same as a base for real-world arm's-length negotiations between sophisticated market players<sup>84</sup> and circumscribing the terms of licensing negotiations was never going to be well-received by members of the association.<sup>85</sup> The change in the policy might lead to a situation wherein the SEP owners draft claims in order to broaden what constitutes a 'Compliant Implementation'. Therefore, what constitutes a 'reasonable' royalty may still need to be ascertained, taking into account the specific patent and its use in issue, instead of the smallest saleable Compliant Implementation. The best way to fix the issue of the calculation of royalty base might just be best catered by a continued case-by-case basis of what is deemed as reasonable.<sup>86</sup>

#### **4.1.2 Injunctive Relief**

The exclusion of an SEP holder from seeking injunctive relief against an unwilling licensee was another drastic change brought by the change in policy.<sup>87</sup> However, the only exception was the scenario involving the litigation based on FRAND royalty and the initial stage of appeal being exhausted.<sup>88</sup> The amendment regarding the injunctive relief is phrased as:

A statement that the Submitter will make available a license for Essential Patent Claims to an unrestricted number of Applicants on a worldwide basis without compensation or under Reasonable Rates, with other reasonable terms and conditions that are demonstrably free of any unfair discrimination to make, have made, use, sell, offer to sell, or import any Compliant Implementation that practiced the Essential Patent Claims for use in conforming with the IEEE Standard. An Accepted LoA that contains such a statement signifies that reasonable terms and conditions, including without compensation or under Reasonable Rates, are sufficient compensation for a license to use those Essential Patent Claims and preclude seeking, or seeking to enforce, a Prohibitive Order except as provided in this policy. The Submitter of an Accepted LoA who has committed to make available a license for one or more Essential Patent Claims agrees that it shall neither seek nor seek to enforce a Prohibitive Order based on such Essential Patent Claim(s) in a jurisdiction unless the implementer fails to participate in, or to comply with the outcome of, an adjudication, including an affirming first-level appellate review, if sought by any party within applicable deadlines, in that jurisdiction by one or more courts that have the authority to: determine Reasonable Rates and other reasonable terms and conditions; adjudicate patent validity, enforceability, essentiality, and infringement; award monetary damages; and resolve any

<sup>83</sup>Farrar (n 73).

<sup>84</sup>Alden Abbott, 'Patent Policy Change Would Undermine Property Rights and Innovation' (*The Heritage Foundation*, 4 March 2015) <<http://www.heritage.org/research/reports/2015/03/patent-policy-change-would-undermine-property-rights-and-innovation>>.

<sup>85</sup>ibid.

<sup>86</sup>*Virnetx* (n 79) 1333.

<sup>87</sup>Sundararaman (n 63).

<sup>88</sup>ibid.

defenses and counterclaims. In jurisdictions where the failure to request a Prohibitive Order in a pleading waives the right to seek a Prohibitive Order at a later time, a Submitter may conditionally plead the right to seek a Prohibitive Order to preserve its right to do so later, if and when this policy's conditions for seeking, or seeking to enforce, a Prohibitive Order are met.<sup>89</sup>

The above amendment in the policy is in opposition to the universally acknowledged availability of injunctive relief to SEP holders against unwilling licensees.<sup>90</sup> Under the revised policy, the right to injunctive relief is available to the SEP holder only in case the implementer of a standard fails to abide by the decision of an arbitral tribunal or the court.<sup>91</sup> This has led to a further reduction of the leverage held by the SEP holder over unwilling licencees/infringers. Furthermore, it can also result in increased litigation between SEP holders and implementers,<sup>92</sup> which is in complete contrast to administrative decisions that have reflected upon the right of SEP holders to seek injunctive relief and conclusively acknowledged that it should be made available against unwilling licensees/infringers.<sup>93</sup> In the case of *Apple, Inc. v Motorola Inc.*, the Federal Circuit opined that there was no *per se* rule prohibiting a party from seeking injunctive relief on an SEP covered by an agreement to license on FRAND terms.<sup>94</sup> The court further held that 'an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect.'<sup>95</sup> Further, in the *Apple* case and in the consent decree settlement in the case of *Google/Motorola*, the United States Federal Trade Commission (USFTC) called out for injunctive relief to be available against unwilling licensees/infringers in limited situations.<sup>96</sup>

By making the right to seek injunctive relief conditional, the new policy fails to provide an viable explanation as to its exclusion or conditional availability to patent holders who have made commitments in compliance with FRAND terms,<sup>97</sup> provided that it forms part of the patent enforcement system in the US. For example,

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<sup>89</sup>IEEE-SA Standards Board Bylaws, s 6.1 (n 69).

<sup>90</sup>Micheal Frohlich, 'Report-Work Plan Item 5: Availability of Injunctive Relief for FRAND-Defense in Patent Infringement Proceedings' (AIPPI, March 2014) 5 <<http://aippi.org/wp-content/uploads/committees/222/Report222AIPPI+report+on+the+availability+of+injunctive+relief+for+FRAND-committed+standard+essential+patentsEnglish.pdf>>.

<sup>91</sup>Sundararaman (n 63).

<sup>92</sup>Thomas Stromberg and Marc Roualet, 'New IEEE Policy Affects Standard Essential Patent Holders' (*Lexology*, 1 April 2015) <<http://www.lexology.com/library/detail.aspx?g=b145d1e6-f42d-4655-813f-de1490a980e5>>.

<sup>93</sup>Frohlich (n 90).

<sup>94</sup>ibid 9; *Apple, Inc. v Motorola, Inc.* (2014) Federal Circuit, Case No. 12-1548.

<sup>95</sup>ibid 1332.

<sup>96</sup>*Motorola Mobility L.L.C. v Google Inc.* (2013) Federal Trade Commission 121-0120.

<sup>97</sup>IEEE-SA Standards Board Bylaws, s 6.1 (IEEE, Draft No. 39 2014) (IEEE-SA Draft Standards <[http://grouper.ieee.org/groups/pp-dialog/drafts\\_comments/SBBylaws\\_100614\\_redline\\_current.pdf](http://grouper.ieee.org/groups/pp-dialog/drafts_comments/SBBylaws_100614_redline_current.pdf)>.

often SEP holders seek injunctions against implementers when they have infringed their IP without seeking licenses from the SEP owner.<sup>98</sup> The possibility of refusal to pay royalties or patent hold-out or refusal to enter into good faith negotiations is often disregarded.<sup>99</sup> As Administrative Law Judge Theodore Essex commented in the public version of his initial determination in the ITC Investigation,

...standards implementers using the technology incorporated in the standard but without seeking a license or without engaging in licensing negotiations can lead to SEP holders filing a suit against and the standards implementers being forced to pay royalties at the FRAND rate, the same FRAND rate at which they were willing to pay the royalties in the first place.<sup>100</sup>

Such a behavior by the SEP implementers might lead to shift in the entire risk associated with the licensing negotiations onto the SEP holders.<sup>101</sup> In the words of Judge Essex, ‘taking away the right to seek injunctive relief from SEP holders not only “puts the risk of loss entirely on the side of the patent holder,” but also “encourages patent hold-out”, which is as unsettling to a fair solution as any patent hold-up might be.’<sup>102</sup>

#### 4.1.3 Reciprocal Licensing

The third significant change introduced in the new policy concerns reciprocal licensing. ‘Reciprocal Licensing’ as defined under the new policy means:

...that the Submitter of an LoA has conditioned its granting of a license 67 for its Essential Patent Claims upon the Applicant’s agreement to grant a license to the Submitter with Reasonable Rates and other reasonable licensing terms and conditions to the Applicant’s Essential Patent Claims, if any, for the referenced IEEE Standard, including any amendments, corrigenda, editions, and revisions. If an LoA references an amendment or corrigendum, the scope of reciprocity includes the base IEEE Standard and its amendments, corrigenda, editions, and revisions.<sup>103</sup>

There is a preclusion for the SEP holder from conditioning the grant of a license on a reciprocal access to the negotiator’s non-SEP patents.<sup>104</sup> The SEP holder is now at a disadvantageous position as the access to key standardized technology

<sup>98</sup>Daryl Lim, ‘Standard Essential Patents, Trolls, and the Smartphone Wars: Triangulating the End Game’ (2014) 119 Penn State Law Review 1.

<sup>99</sup>Teece (n 28).

<sup>100</sup>*In re Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof* (2014) United States International Trade Commission, Inv. No. 337-TA-868 113–14.

<sup>101</sup>ibid 114.

<sup>102</sup>ibid; Sandra Badin, ‘Patent Hold-up or Patent Hold-out? Judge Essex adds his voice to the SEP-FRAND Debate’ (*Intellectual Property Alert*, 10 July 2014) <<https://www.mintz.com/newsletter/2014/Advisories/4096-0714-NAT-IP/4096-0714-NAT-IP.pdf>>.

<sup>103</sup>IEEE-SA Standards Board Bylaws s 6.1 (n 69).

<sup>104</sup>Sundararaman (n 63).

must be granted without having a reciprocal access to other party's technology as this aspect becomes the vital part with respect to commercialization of that SEP holder's products.<sup>105</sup> This scenario will most likely leave the owners of multiple SEP's in an unfavorable position as compared to those involved in non-SEP patenting. Further, large scale businesses have the risk of disincentivizing from developing and investing in such patents which can possibly elevate the quality of standards setting, resulting in the lower level of usefulness of such vital standard.<sup>106</sup>

This will most definitely lead to royalty stacking where, there will be a disruption of existing licensing practices which in turn comprises of cross licensing negotiations, leading to a possibility of higher downstream prices. In essence, it is a manifestation of the 'Cournot Complements' principle, which states that the overall price of complimentary inputs sold by different firms is likely to be higher, as opposed to the inputs being sold by a single entity.<sup>107</sup>

The process Cross-Licensing addresses this issue, where two firms will have smooth negotiations between holders of complimentary patents, subsequently lowering the making cost for standards-compliant products. It is essential for bringing the royalty claim down and ensuring freedom to operate. But, this policy update may most likely result in consumers paying a higher cost for products, while strangulating innovation efforts.<sup>108</sup>

## 4.2 Major Reactions to the IPR Policy Changes

There has been a lot of disdain with regards to the policy changes by the high technology industries personnels as it has completely altered the terms on which patents can be made available to implementers of patented technology.<sup>109</sup> According to Irwin Jacobs, CEO of Emeritus, '[T]he proposed changes, and the process that has been followed, threaten the reputation and future of the IEEE as a developer of advanced technology'.<sup>110</sup> Many other CEOs have voiced their opinion against the policy changes and believe that the changes provide short-term commercial benefits to investors by lowering fees that could create long-term effects and thus reduce the incentive for R&D.<sup>111</sup>

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<sup>105</sup>IEEE-SA Draft Standards (n 97).

<sup>106</sup>Abbott (n 84).

<sup>107</sup>Ramon Casadesus-Masanell, 'Competing Complements' (2008) 1 Harvard Business School Working Paper No. 09-009 <<http://www.hbs.edu/faculty/Publication%20files/09-009.pdf>>.

<sup>108</sup>Abbott (n 84).

<sup>109</sup>Walko (n 74).

<sup>110</sup>ibid.

<sup>111</sup>ibid.

Royalties that are based on the smallest saleable compliant implementation rule is the biggest and most arguable change that has been brought about by this new policy.<sup>112</sup> Some of the most convincing claims against the use of this model for calculation of royalty are as follows:

First, the return value received by an implementor is not a true reflection of the smallest saleable unit to that particular product, this usually is different at most times. It is indeed a fact that the entire process of negotiation between the SEP holders and implementers centers on the true value of the patented technology to the implementer.<sup>113</sup> The value can be considered to be in between the smallest saleable unit and compliant implementations.<sup>114</sup> Thus, it can be argued considering the smallest saleable compliant implementation model, if considered as the base for royalty determination will put the implementor in an advantageous position over the technology provider, which is unfair. According to David Teece and Edward Sherry, there lies a ‘synergistic value’ between the smallest saleable unit and other compliant implementations. These ‘synergic values’, at times which probably flows from smallest saleable unit and this provides an additional value to the product which further leads to increased returns on the products to the implementer.<sup>115</sup> The focus if given to the smallest saleable unit will mean undue focus and hence ignorance of this ‘synergistic value’(which can be considered in certain cases) and its share not being transferred to the SEP holder..

In the case of *Commonwealth Scientific & Industrial Research Organisation (CSIRO) v Cisco Systems, Inc.*, involving WLAN cellular technology, Justice Davis stated:

The benefit of the patent lies in the [technological] idea, not in the small amount of silicon that happens to be where that idea is physically implemented. ... Basing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.<sup>116</sup>

In a similar manner, it might be a far fetched idea to consider basing the calculation of royalties on chipset prices would adequately compensate the SEP holder, especially in those cases where the calculation of royalties based on chipset value was not made adequately. Therefore, in all likelihood, there is a possibility of patent holders unable to receive adequate royalties reflected from the prices of

<sup>112</sup>David Long, ‘IEEE’s Controversial Proposed Intellectual Property Rights (IPR) Policy Amendments’ (*Essential Patent Blog*, 3 February 2015) <<https://www.essentialpatentblog.com/2015/02/ieee/>>.

<sup>113</sup>Teece (n 28) 3–4.

<sup>114</sup>ibid.

<sup>115</sup>ibid 8.

<sup>116</sup>*CSIRO v CISCO Systems, Inc.* (2015) United States Court of Appeals, Federal Circuit 809 F.3d 1295,1300 quoting *CSIRO v CISCO Systems, Inc.* (2014) E.D. Tex. No. 6:11-cv-343, 2014 WL 3805817, 11; Jorge Contreras, ‘CSIRO v CISCO: The Convergence of RAND and Non-RAND Royalties for Standards-essential Patents’ (*Patently-o*, 7 December 2015) <<http://patentlyo.com/patent/2015/12/convergence-royalties-standards.html>>.

chipset or profit margins.<sup>117</sup> From the economic perspective and public policy, the amendments to the IEEE policy have attracted a lot of criticism amounting to FRAND benefiting the implementers at the expense of patent holders.<sup>118</sup>

## 5 Policy Implications and the Post 2015 Era at IEEE

Since the implementation of new IEEE patent policy on 15 March 2015, the SSO has received a number of duplicate, negative and missing LoAs. The duplicate LoAs are counted as LoA restatements filed for amendments, standards, or revisions to LoAs which were previously accepted from the same patent holder. On the other hand, negative LoAs means accepted LoA in which the patent holder refuses to license under the new IEEE patent policy. Further, missing LoA means a disclosed essential patent claim which was sought by IEEE but did not receive an Accepted LoA as of 30 September 2016. The 2015 amendments to the IEEE IPR policy led to a notable decrease in non-duplicate LoAs.<sup>119</sup> An 86% surge has been observed in the submission of negative LoAs by the patent owners with respect to the IEEE flagship 802.11 WiFi standard.<sup>120</sup> As a result, one can substantiate, that the patent holders are unwilling to invest in R&D and licence their SEPs under the new policy. The graphical representation hereinbelow in Fig. 3 (Changes in the number of LoA after 2015 IEEE policy change) reflects upon the changes in the number of LoAs after IEEE policy change in 2015.<sup>121</sup>

Figure 3 illustrates the changes in the number of LoAs after 2015 IEEE policy change. It can be seen that the average number of positive LoA's per year before the policy change of 2015 stood at 22.8.<sup>122</sup> However, this number declined significantly to an average of only two (2) LoAs per year after the policy change in 2015.<sup>123</sup> Further, one can also substantiate that there was 91% reduction of positive LoA's after the policy change.<sup>124</sup> The 10 negative LoA's submitted after the policy change were made by companies such as Nokia (6), Ericsson (2), Interdigital (1) and Orange (1).<sup>125</sup>

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<sup>117</sup>Teece (n 28) 8–9.

<sup>118</sup>ibid 9.

<sup>119</sup>Katznelson (n 52).

<sup>120</sup>ibid.

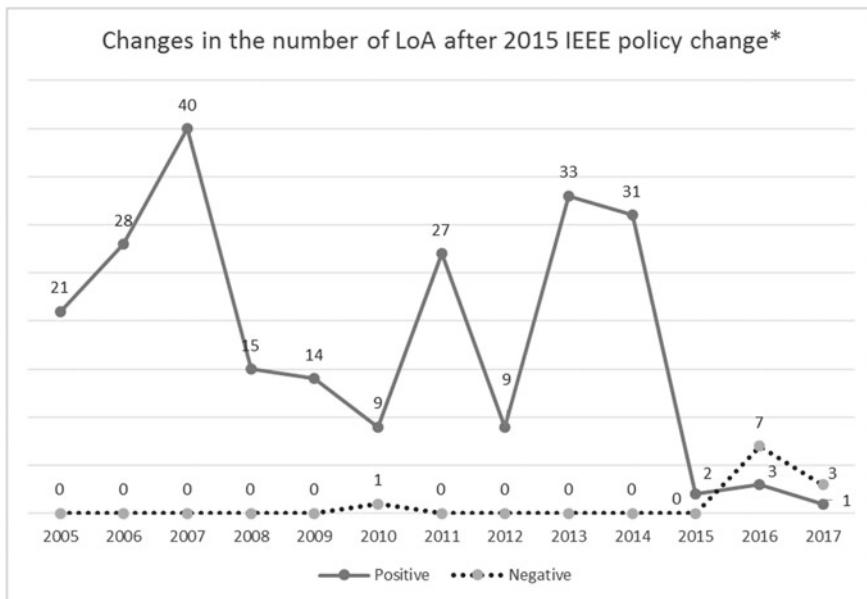
<sup>121</sup>Kirti Gupta, ‘IEEE Patent Policy Revisions: An Empirical Examination of Impact’ (American Bar Association).

<sup>122</sup>ibid.

<sup>123</sup>ibid.

<sup>124</sup>ibid.

<sup>125</sup>ibid.



**Fig. 3** Changes in the number of LoA after 2015 IEEE policy change (after removing duplicates and repeats). *Source* Kirti Gupta, 'IEEE Patent Policy Revisions: An Empirical Examination of Impact' (American Bar Association)

A total number of forty (40) LoAs have been submitted after the policy change. Figure 4 (802.11 LoAs submitted after policy change) depicting the inflation in the number of positive LoAs due to gross counting of submitted LoAs.<sup>126</sup>

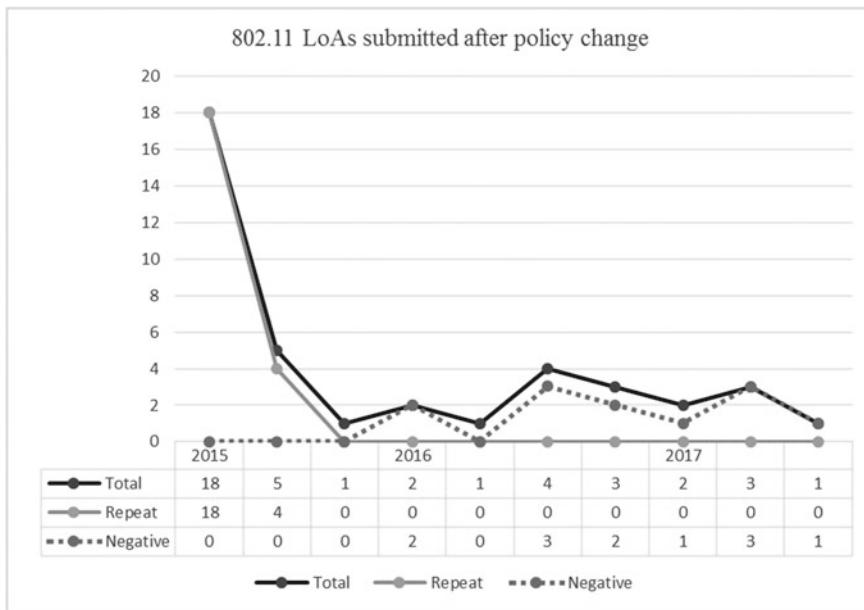
Figure 4 showcases the total number of LoAs that have been submitted after the policy change. We can see that since the change in policy in 2015, the submission rate of LoAs has significantly decreased. Since the policy change in 2015, 22 LoAs have been repeated, 12 LoAs are negative and only six LoAs are new positive.<sup>127</sup> Overall, empirical data suggests that post-March 2015, 85% of LoAs are either repeat or negative.<sup>128</sup>

The standard participants, at the time of standard setting do not have a sense of the market value that will gradually grow making it rather difficult to agree on the value of standard technology or the essential patents to that product. In this scenario the parties have no other option than to agree to a framework of use which is also in

<sup>126</sup>ibid.

<sup>127</sup>ibid.

<sup>128</sup>ibid.



**Fig. 4** 802.11 LoAs submitted after policy change. *Source* Kirti Gupta, 'IEEE Patent Policy Revisions: An Empirical Examination of Impact' (American Bar Association)

simple terms known as FRAND licensing terms. Figure 5 below shows the changes in the LoAs received by IEEE-SA for the different versions of the 802.11 standard during 2011–2017.<sup>129</sup>

Figure 5 is sourced from the PatCom Board meetings from 2011 to PatCom Board meetings held on 4 December 2017.<sup>130</sup> PatCom posted the number of LoA's that it received and accepted. In the meeting held on 6 June 2012 one negative LoA was submitted<sup>131</sup> and overall, a total number of ten negative LoA's were received last year i.e. 2017.<sup>132</sup> Further, PatCom held their last meeting on 6 March 2018 and it was reported that a total of 12 LoAs were accepted since the December 2017 meeting, out of which three LoAs were negative.<sup>133</sup>

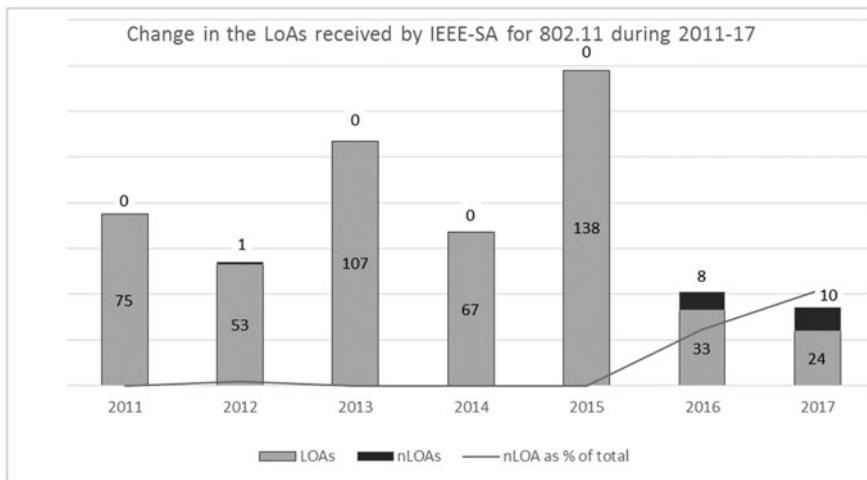
<sup>129</sup>'IEEE 802.11 and Amendments Patent Letters of Assurance' (IEEE-SA) <[http://standards.ieee.org/about/sasb/patcom/pat802\\_11.html](http://standards.ieee.org/about/sasb/patcom/pat802_11.html)>.

<sup>130</sup>'PatCom Meeting Information' (IEEE-SA) <<http://standards.ieee.org/about/sasb/patcom/meetings.html>>.

<sup>131</sup>'PatCom Meeting Minutes' (IEEE-SA, June 2012) <<http://standards.ieee.org/about/sasb/patcom/0612mins.pdf>>.

<sup>132</sup>'PatCom Meeting Minutes' (IEEE-SA, December 2016). <<http://standards.ieee.org/about/sasb/patcom/1216patmins.pdf>>; 'PatCom Meeting Minutes' (IEEE-SA, September 2016) <<http://standards.ieee.org/about/sasb/patcom/0916patmins.pdf>>; 'PatCom Meeting Minutes' (IEEE-SA, June 2016) <<http://standards.ieee.org/about/sasb/patcom/0616patmins.pdf>>; 'PatCom Meeting Minutes' (IEEE-SA, March 2016) <<http://standards.ieee.org/about/sasb/patcom/0316patmins.pdf>>.

<sup>133</sup>'PatCom Meeting Minutes' (IEEE-SA, March 2018).



**Fig. 5** Change in the LoAs received by IEEE-SA for 802.11 during 2011–17. Source Authors' calculations based on minutes of meeting of IEEE-SA Standards

Another major change caused by the IEEE policy change in 2015 which has found empirical evidence is the decline in the number of 802 Project Authorization Requests (PARs).<sup>134</sup> PARs is the means by which all standards projects gets initiated within the IEEE-SA.<sup>135</sup> They define the scope, purpose and contact points for the new project.<sup>136</sup> They kickstart the progress of new standards, amendments or revisions for all 802 Working-Groups (WGs).<sup>137</sup> Figure 6<sup>138</sup> (No. of 802 Project Authorization Requests) depicting empirical evidence on decrease in the number of 802 PARs after the policy change.

Figure 6 illustrates the IEEE 802 PAR dataset within the period of 2009–2017. A careful analysis of these findings showcases a decline of (4.2%) in new PARs in the 802 WGs after the policy change.<sup>139</sup>

The Innovation Alliance has called for a reversal to the policy changes, as they suggest it would ‘arbitrarily reduce the level of protection given to WiFi related

<sup>134</sup>Gupta (n 121).

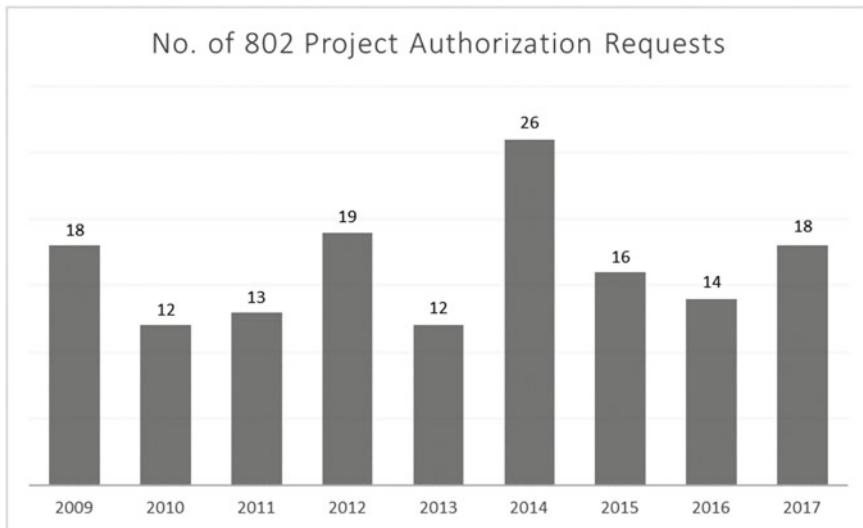
<sup>135</sup>‘FAQs: PARs, the PAR Form & Continuous Processing’ (IEEE-SA) <<https://standards.ieee.org/faqs/pars.html>>.

<sup>136</sup>ibid.

<sup>137</sup>Gupta (n 121).

<sup>138</sup>ibid.

<sup>139</sup>ibid.



**Fig. 6** No. of 802 Project Authorization Requests. *Source* Kirti Gupta, ‘IEEE Patent Policy Revisions: An Empirical Examination of Impact’ (American Bar Association)

patents, impose unconstitutional limits on patent rights, and end the traditional market-based negotiation process for these patents by imposing what amount to *de facto* compulsory licensing.<sup>140</sup> The IEEE has failed to give any definitive clause on how they plan to deal with known but unpledged SEPs. However, FAQ 13 states that the PatCom ‘will review the circumstances and make a recommendation to the IEEE-SA Standards Board.’<sup>141</sup>

## 6 Shift in US Antitrust Enforcement *vis-à-vis* SSO IPR Policies

A series of recent developments on competition policy and antitrust enforcement, in the US, coupled with the views echoed by the newly appointed Assistant Attorney General (AAG) of the US Department of Justice, Makan Delrahim, carve out a fresh strategy to embrace technological changes led by innovation, patents and digitization. Some of the speeches delivered by the new antitrust chief are so powerful that they have come to not just redefine a new path for policymaking in antitrust and IP, but to also reignite the fire on technology and innovation. Since his confirmation as the new AAG on 27 September 2017, Mr. Delrahim has made nine

<sup>140</sup>Walko (n 74).

<sup>141</sup>Katznelson (n 52).

speeches, out of which he has touched upon several aspects of the current IP policy of the US antitrust division in at least five of them. Introducing the new IP policy for the first time in November 2017, the AAG stressed the need to revive appreciation of the rights of innovators to boost innovation.<sup>142</sup> In the context of SEPs, he recognized that leaning of the US Department of Justice towards implementers of standards could potentially damage future innovation, and that competition authority ‘must exercise greater humility’ in the application of antitrust laws to SEPs.<sup>143</sup> Building upon his ideas in his address at the US Embassy in Beijing in February 2018, the AAG noted that the focus of competition authorities must be on the promotion and growth of innovation rather to short term pricing. He built upon the idea of protection and promotion of rights of SEP holders, which is at the core of the new policy. The policy change envisages that competition laws should not work to stifle innovation by creating disincentives for innovation. In furtherance of this view, he also placed emphasis on IP courts, as they would be better equipped to resolve disputes between implementers and SEP holders.

The right of SEP holders to exclude others from the use of their patented technology has long been lost in the tussle between implementers, innovators and standards setting bodies. In a series of recent speeches, the head of the Antitrust Division, Makan Delrahim, has claimed that patentees have an absolute ‘property right to exclude’ that is automatically followed by an injunction. He has questioned the existence of patent hold-up (by which patentees demand supracompetitive royalties after their patents are incorporated into industry standards). Because these views represent a significant divergence from the broad, bipartisan consensus that has emerged over the past decade, former FTC Chairman Tim Muris and Michael Carrier from Rutgers Law School have written a three-page letter in response.<sup>144</sup> AAG Delrahim reinstated this principle and was of the belief that:

patents are a form of property, and the right to exclude is one of the most fundamental bargaining rights a property owner possesses. Rules that deprive a patent holder from exercising this right—whether imposed by an SSO or by a court—to innovate and worsen the problem of hold-out.<sup>145</sup>

<sup>142</sup>Makan Delrahim, Assistant Attorney General, Antitrust Division, US Department of Justice, ‘Competition, Intellectual Property and Economic Prosperity’ (Speech delivered at US Embassy, Beijing, 1 February 2018) <<https://www.justice.gov/opa/speech/file/1030496/download>>.

<sup>143</sup>Makan Delrahim, Assistant Attorney General, Antitrust Division, US Department of Justice, ‘Take It to the Limit: Respecting Innovation Incentives in the Application of Antitrust Law’ (Speech delivered at USC Gould School of Law, California, 10 November 2017) <<https://www.justice.gov/opa/speech/file/1010746/download>> 10.

<sup>144</sup>Michael Carrier and Timothy Muris letter to Makan Delrahim, Assistant Attorney General, Antitrust Division, US Department of Justice.

<sup>145</sup>Makan Delrahim, Assistant Attorney General, Antitrust Division, US Department of Justice, ‘Good Times, Bad Times, Trust Will Take Us Far: Competition Enforcement and the Relationship Between Washington and Brussels’ (Speech delivered at College of Europe, Brussels, 21 February 2018) 4.

He observed that if the innovators are deprived of rights over their property by means of controlling their licensing agreements and use of information without correct licensing, then such practices will have a severe impact on the quality and quantity of innovation. In the case of SEPs, many a times the SEP holders have been deprived of their right to exclude under the garb of FRAND licensing, and have also been denied their right to injunctions, making FRAND a unilateral obligation. In Mr. Delrahim's view, this right of exclusion granted by IP law should not be taken away in the name of utilitarian policies of technical standardization. This trend is also problematic as the innovators of standardized technologies are faced with a lower value and unfair commercialization of their invention. In the long run, lower returns on patents that are critical to the working of key technical standards are likely to reduce investment in future innovation.

Subsequently, the AAG's delivered remarks in Brussels where he acknowledged that bridging the gap between 'policy and substance' is essential for enforcement of competition laws in the European Union (EU) and US.<sup>146</sup> He stressed on the goal of competition policy in protection of consumers and market competition, rather than protection of competitors, which is a policy stand espoused by both the EU and US antitrust establishments. Reiterating the long-standing view of the antitrust division of DOJ that (a) patent laws incentivize innovation for the benefit of consumers, and (b) licensing of patent rights is generally pro-competitive, the AAG indicated an approach that is quite different from the one that prevailed during the Obama administration. He underscored the fact that antitrust enforcement in the current and earlier regimes has 'strayed too far'<sup>147</sup> in their protection of the rights of implementers (of patent-based technical standards), at the expense of rights of innovators (holders of patents that become a part of the standard).

In his latest speech in March, the AAG drew attention to the enduring belief underlying the American innovation ecosystem that the rights over IP belongs to the inventor as much as they belong to the public. He referred to a 'new Madison approach', after James Madison, who is considered by the AAG to be the true founding father of US patent law.<sup>148</sup> The AAG is attempting to recreate an environment where the rights of patent holders are respected, in order to move away from a 'retro-Jefferson' view that patents confer too much power that should be curbed.<sup>149</sup> The new Madison approach seeks to regulate the innovation environment in a way that preserves sufficient incentives to innovate. He relates the premise of Madison's theory with issues around SEP licensing, regulation of SSOs, and the role of antitrust law in regulating patents. The Madison approach forms part of the

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<sup>146</sup>ibid 13.

<sup>147</sup>Delrahim (n 142).

<sup>148</sup>Makan Delrahim, Assistant Attorney General, Antitrust Division, US Department of Justice, 'The "New Madison" Approach to Antitrust and Intellectual Property Law' (Speech delivered at University of Pennsylvania Law School, Philadelphia, March 16, 2018).

<sup>149</sup>ibid 3–4.

basic argument of Delrahim, which is centered on the fundamental right of the patent holder to exclude.<sup>150</sup>

In addressing the misplaced role of antitrust law in policing the hold-up problem, the AAG restates that when antitrust agencies scrutinize private contracts in the context of patent licensing, it adversely affects innovation and market competition.<sup>151</sup> The AAG succinctly alluded to the following:<sup>152</sup> First, that application of antitrust laws to the issue of hold-up has, so far remained devoid of empirical data, and, therefore, an evidence-based enforcement of antitrust is called for. Second, antitrust law enforcement bodies should ensure that their actions do not transform a private voluntary licensing regime for SEPs into a regime of compulsory licensing. Third, in line with the Madison approach, it is important to look at regulation of SSOs to deter any possibility of collusive behavior.

What is put forth now is a new evidence-based approach in the application of antitrust law to the needs and concerns of both implementers and SEP holders to facilitate a symmetric application of the law. This brings a significant change in the industry by introducing much needed clarity in the roles of implementers and innovators. It also brings to the fore the often neglected issue of ‘hold-out’.<sup>153</sup> According to Mr. Delrahim, patent hold-out poses a more serious challenge than hold-up as it arises due to under-investment by implementers or their refusal to take a license. He states, ‘It is important to recognize that innovators make an investment before they know whether that investment will ever pay off. If the implementers hold-out, the innovator has no recourse, even if the innovation is successful.’<sup>154</sup> The potentially serious impact on the market and on the consumers of such opportunistic behavior in the industry is a critical issue that will be focused upon in the new policy. Mr. Delrahim’s emphasis on the symmetric nature of patent hold-up and hold-out as a recurring issue in his speeches throws light on several thought-provoking issues. If implemented, not only is it likely to broaden the scope of antitrust scrutiny, it would also restore balance to an otherwise imbalanced discourse prevailing today. The actions of implementers, including unnecessary delays in the licensing process, patent trespassing, unresponsiveness to negotiation and placing all liability of FRAND on the innovators, will also be under the scanner, as proposed by the AAG. The earlier stand of DOJ was that the involvement of antitrust agency was necessary in investigating FRAND commitment for SEPs to judge the actions of SEP holders,<sup>155</sup> but now the department is

<sup>150</sup>ibid 5.

<sup>151</sup>Delrahim (n 148) 9.

<sup>152</sup>Delrahim (n 145) 4.

<sup>153</sup>Ashish Bharadwaj, ‘A Note on the Neglected Issue Of Reverse Patent Hold-up’ (2018) 13(2) Journal of Intellectual Property Law & Practice 3.

<sup>154</sup>Delrahim (n 145) 6.

<sup>155</sup>Dell Computer Corp. (1996) Federal Trade Commission 121 F.T.C. 616; Union Oil Company of California (2005) Federal Trade Commission 140 F.T.C. 123; Rambus Inc. (2006) Federal Trade Commission 142 F.T.C. 98.

seeking to regulate the actions of SSOs. Intervention by an antitrust agency is called for where anticompetitive actions and collusive behavior by prospective licensees is detected, including restricting royalty rates and diluting right to seek injunctive relief by SSOs. Other than minimizing unnecessary intervention by antitrust authorities, such narrowing of the scope of antitrust investigation is said to open the larger market to more competition and innovation. The aim of correcting market distortions arising from any asymmetry in bargaining power may not be fulfilled using antitrust law, and may, in fact, may lead to an adverse impact on innovation. Under the new policy highlighted by the AAG, focus will shift to include the actions of SSOs and implementers, which may be anticompetitive, and require interference of antitrust authorities. This will see the antitrust authorities taking cognizance of, and carefully scrutinizing any anticompetitive behavior of implementers and SEP holders.

The new policy change also focuses on ‘other remedies’, including civil and contractual reliefs, in place of antitrust law. Observing unwarranted involvement of antitrust agencies in certain disputes related to patents in high technology, AAG Delrahim stated that remedies, other than those offered under antitrust law, could be relied upon to ensure that interests of all parties are preserved. The reason is that several issues involving implementers and SEP holders are largely associated with some form of contractual arrangement. In cases where such contracts are breached or contractual duties are reneged, damages and injunctions should be the primary source of relief instead of antitrust remedies under common law. Common law remedies for contractual disputes (including those around licensing of essential patents under terms that are fair, reasonable, and non-discriminatory) allow both parties a chance to present their case and have a dialogue on the interpretation and implication of each prong of ‘FRAND’.<sup>156</sup> Common law remedies allowing settlement of a contractual dispute between private individuals better serves the interests of the parties without an interference of public regulatory bodies.

AAG’s remarks rekindles the belief that public law regulation of private contracts may create more market distortions, including the problem of under-investment or reverse patent hold-up, instead of solving them. The intervention of antitrust enforcers should be limited or ‘exercised with humility’ to avoid any adverse effect on market competition. Antitrust law should be expanded to include ‘non-competition public interest factors that balance competition and non-competition factors with equity’.<sup>157</sup> It can also be inferred from Mr. Delrahim’s speeches that his new policy proposal supports self-regulation of SSOs. A regulatory approach followed by the SSOs that is more precautionary of

<sup>156</sup> *Telefonaktiebolaget LM Ericsson v Mercury Electronics & Anr* (2014) High Court of Delhi, I.A No. 3825 of 2013 and I.A No. 4694 of 2013 in Civil Suit (Original Side) No. 442 of 2013; *Telefonaktiebolaget LM Ericsson (Publ) v Intex Technologies (India) Limited* (2015) (62)PTC90 (Del); *Microsoft* (n 56).

<sup>157</sup> Koren W. Wong-Ervin, ‘Protecting Intellectual Property Rights Abroad: Due Process, Public Interest Factors, and Extra-Jurisdictional Remedies’ George Mason University Law & Economics Research Paper Series 17-18.

assessing their own rules *vis-à-vis* antitrust laws would result in less intrusion of antitrust authorities in standard setting and development processes. In sharp contrast to the beliefs of Mr. Delrahim's predecessors, the new approach restores faith in free market and throws light on equality in the treatment of parties. The new approach lays emphasis on a harmonious application of both these principles to allow the market to function smoothly without an overreach of antitrust laws to unilateral conduct of implementers and innovators.<sup>158</sup>

## 7 Conclusion

While it cannot be denied that innovation is the driving force behind economic growth in ICT and allied sectors, it is a fact that in spite of this, the patent holders receive only a small fraction of the social benefits attached to their patented inventions. Hence, any potential situation leading to the reduced return on these inventions would automatically result in an adverse effect on innovation ecosystem in ways that might be societally undesirable.<sup>159</sup> The benefit that a claimed invention can offer to an end product seems to have been ignored by the changes made in the existing policy.

It has also excluded the value of Essential Patent Claim's technology in the IEEE standard from the scope of 'reasonable rates'.<sup>160</sup> This may possibly result in all the implementers being benefited, leaving patent holders at loss with respect to the gains from standardization. This will be a huge blow on the patent holder as their investment in research and development of technology will not gain them any profit. This will inevitably lead to patent holders settling for rates negotiated *ex-ante*, before the incorporation of the technology in the standard. One may argue this is a possible way of shutting down a hold-up, but nonetheless it is unfair and undesirable as the fair share in overall gains is denied.<sup>161</sup>

The changes in the policy creates an imbalance between the rights of innovators, in which they lose value on their patents, and the implementers of technologies. This may lead to market imbalance as there is interference in the market processes by incongruously restricting the terms of licensing negotiations. The incentives to create technology then becomes considerably less which is a matter of concern. The consequences of which is reduced economic incentives to contribute technology to efforts of standardization, which is very likely to be the deciding factor to the progress of technology.<sup>162</sup>

<sup>158</sup>Delrahim (n 145).

<sup>159</sup>Abbott (n 84).

<sup>160</sup>Badin (n 102).

<sup>161</sup>Abbott (n 84); *ibid.*

<sup>162</sup>*ibid.*

The need of the hour is to strike the right balance, in both government intervention and SSO's IPR policies between the interest of implementors and innovators.<sup>163</sup> The balance is important in order to determine 'a practical and fair definition of what fair and reasonable is and what amounts really to non-discriminatory licensing'.<sup>164</sup> In the absence of balance, the investments will not be made in open standards which will result in a lot of proprietary standards instead of proprietary technologies.<sup>165</sup> The imbalance will lead to reverse hold-up or hold-out, increased SEP litigation, a reduction in SSO participation, reduced arm's length SEP licensing and cutting of R&D expenditure from SEPs to unencumbered non-essential technologies.

The importance of IPR policies of SSOs should never be ignored while considering the entire system of things involving standardization. In case of an imbalance of incentives between the patent holders and the implementers, then there is a likelihood of some of the foremost contributors of technological advancement and standardization becoming unresponsive in future standard setting process of a SSO, and in few cases, there persist a risk of these contributors diverting their technological contributions to standard setting activities in other SSO's.

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<sup>163</sup>Gupta (n 30).

<sup>164</sup>ibid.

<sup>165</sup>ibid.

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**Part II**

**Evolving Jurisprudence in Standard  
Essential Patents**

# Chapter 6

## Interpreting the ‘FRAND’ in FRAND Licensing: Licensing and Competition Law Ramifications of the 2017 *Unwired Planet v Huawei* UK High Court Judgements



Noah D. Mesel

### 1 Introduction

Professors, pundits, patentees and practitioners around the world have spent nearly a year (as of the publication of this book) trying to decipher the significance of the UK High Court’s judgements in the *Unwired Planet v Huawei* case.<sup>1</sup> No one can seriously doubt that Mr. Justice Birss, who presided over both the technical and economic trials in the *Unwired Planet* cases, has added helpfully to the corpus of common law relating to FRAND licensing. Many also have attempted to tease out of these judgements new guidance under competition law as it relates to patent licensing post the Court of Justice of the European Union (CJEU) judgement in *Huawei v ZTE*.<sup>2</sup>

This chapter provides perspectives of a licensing practitioner. As discussed here, the *Unwired Planet* judgements should be read first and foremost as clarifications of (1) what fair, reasonable, and non-discriminatory (FRAND) means; (2) how to assess what is FRAND in a particular context; and (3) how to derive FRAND in the face of evolving telecoms standards and licensing practices. The competition law points in the case, while interesting to many, ultimately were distant secondary considerations in the court’s judgement. However, those points are discussed below mainly to show that the court was careful to build a record reflecting its consideration

<sup>1</sup>*Unwired Planet International Ltd v Huawei Technologies Co. Ltd* [2017] EWHC 711 (Pat) (5 April 2017) (*Unwired Planet I*) and *Unwired Planet International Ltd v Huawei Technologies Co. Ltd* [2017] EWHC 1304 (Pat) (7 June 2017) (*Unwired Planet II*).

<sup>2</sup>Case No. C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH* EU: C:2015:477.

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of the CJEU's elaboration of the process parties must follow in FRAND patent licensing cases where injunctive relief is a possibility.

Much literature exists already applying familiar antitrust-oriented economic analysis to the process of FRAND licensing. As a practical matter, however, competition law constructs and analysis only come into play when a licensing dispute ends up in court. Parties that practice the inventions in patents but do not want to pay a fair royalty invoke terms such as 'dominant position' and 'patent hold-up'. What happens in the marketplace during license negotiations, though, rarely involves a conscious application of competition economics theory. Rather, the parties will—as Unwired and Huawei did here—fight it out in hard-nosed negotiations until one of them (usually the patentee) seeks judicial relief.

In court, the experts bandy economic terms and hypothetical pricing models to argue their clients' respective cases as to the meaning of FRAND. Some of the economic and pricing models might resonate with antitrust lexicology. Despite efforts to make the entire case sound like a competition law proposition, as the recalcitrant licensee is prone to do, the overlap of competition and patent law here is very narrow. Pricing discrimination, as a competition law concept, and the 'non-discriminatory' prong of patent licensing FRAND law are the only areas of overlap in the legal Venn Diagram.

Certainly, some of the most interesting and provocative analysis of the *Unwired Planet* judgements come from commentators who are much better versed in anti-trust economics than this author. But those authors possibly are not aware, or have not considered, some of the nuances that inform how Justice Birss approached his reasoning and reached his conclusions in the two judgements.

Here is where this chapter attempts to shed additional light. Building on the author's perspective as General Counsel of Unwired Planet as the economic case was developed, this chapter lays out in Part two the context leading up to the economic trial, presents in Part three an analysis of the High Court's two judgements after the economic case, and contends in Part four that the court is mostly right but in parts wrong on how FRAND, as matter of patent licensing practice and competition law, should be applied going forward. Also in Part five, the author suggests the ultimate significance of the *Unwired Planet* judgements and evaluates other published critiques.

## 2 What Led to the *Unwired Planet* Decisions?

### 2.1 A Brief History of *Unwired Planet*

Justice Birss' judgements are best understood in the context of the facts he was very familiar with by the time of the economic trial. This part will start with a short history of Unwired Planet's role in the market, and how it engaged in the negotiations against some of the world's largest telecom equipment suppliers before and

during this litigation is informative. Unwired Planet, formerly a product company called Openwave Systems, Inc., had lost its market when smartphones became the *de facto* standard in 2007–08.<sup>3</sup>

As a result of its product lines becoming largely obsolete, Unwired Planet became, in the parlance of patent practitioners, non-practicing entity—or less politely a ‘troll.’ However, with just a few hundred patents, it was not a particularly formidable patent asserter in a market where the potential licensees and patentees are companies like Apple, Google, Huawei, and Samsung, among others—elephants on the savannah compared to Unwired Planet’s field mouse. Unwired Planet’s board and management saw the need to bulk up if they were to establish themselves as a credible licensing force to be reckoned with. Accordingly, they entered discussions with Ericsson<sup>4</sup> about purchasing a substantial subset of Ericsson’s mobile phone patent portfolio.

## ***2.2 Commencement of Licensing Campaign by Unwired Planet***

In January 2013, The two companies eventually negotiated the terms of a Master Sale Agreement (the MSA) under which Unwired Planet purchased over 2,000 Ericsson patents, with additional patents to be added annually to the list of sold patents and/or swapped with Unwired Planet.<sup>5</sup> Under the MSA’s terms, Unwired was to initiate an active licensing program in part for Ericsson’s benefit.<sup>6</sup> Any proceeds from the licensing program would be shared with Ericsson according to a formula stated in the MSA. Many other details of the arrangement were also

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<sup>3</sup>Openwave Systems, Inc., developed a technology called Web Application Protocol (WAP), which enabled feature phones to communicate with other devices on the Internet. WAP enjoyed a massive 90% worldwide market share until the advent of the modern Blackberry, iPhone, and Android-based phones in 2007–08. Then Openwave’s market for WAP disappeared within a matter of months. Openwave eventually sold off its software products, and was left with a few hundred of its own patents and large balance in its bank accounts.

<sup>4</sup>Ericsson AB, based in Sweden, is one of the world’s largest communications equipment manufacturers. The company holds over 42,000 patents. See ‘Patents and Licensing’ (Ericsson, 2017) <<https://www.ericsson.com/en/networked-society/innovation/patents-and-licensing>> accessed 8 January 2018.

<sup>5</sup>A redacted version of the MSA is publicly available on the US Securities and Exchange Commission website. See Securities Exchange Commission, ‘Master Sale Agreement’ (2017) <<https://www.sec.gov/Archives/edgar/data/1082506/000119312513012058/d466328dex102.htm>> accessed 15 October 2017.

<sup>6</sup>In such an arrangement, the party in Unwired Planet’s position is commonly referred to as a ‘privateer,’ evoking the pirates of the mid-1600’s in Europe who were commissioned by governments to use their privately-owned ships to fight or capture enemy ships.

dictated by Ericsson in the MSA.<sup>7</sup> In the words of Mr. Justice Birss, ‘Ericsson were in control of the process.’<sup>8</sup> Ericsson’s role later became an issue in the competition case, as will be discussed below.

Unwired’s management in the US immediately began a licensing campaign based upon the Openwave portfolio as well as the much larger Ericsson portfolio they had acquired. They aggressively pursued patent licenses from Huawei, Samsung and others. Perhaps not surprisingly, the large telecoms went through the motions of meeting to discuss potential licenses. But after months, and after multiple face-to-face and telephone meetings, none of the negotiations had made any meaningful progress. Just five months after beginning its effort to engage Huawei in serious licensing discussions, Unwired Planet, Inc.’s CEO told Ericsson in October 2013, ‘...we are having to initiate new litigation due to lack of any licensing happening.’<sup>9</sup> The much larger companies apparently had decided they would wait out Unwired, which had no other revenue source than patent licenses, and let Unwired run out of funds. But the larger companies miscalculated.

### ***2.3 Failure of Licensing and Commencement of Litigation***

By early 2014, it was clear to Unwired that Huawei and Samsung had no intention of paying a license fee unless they were compelled to do so. Unwired responded by filing claims of patent infringement against Huawei, Samsung, Google and others in the UK High Court (Chancery Division, Patents court) and in Germany (in the Dusseldorf regional court).<sup>10</sup> The claim in the UK alleged that defendants infringed six patents, five of which were standards-essential patents (SEPs) reading on the 2G, 3G and 4G (LTE) standards promulgated by the European Telecommunications Standards Institute (ETSI). In the UK action, Huawei and Samsung filed counter-claims, alleging *inter alia*, that Unwired, and Ericsson had acted in breach of Article 102 of the European Competition Law.<sup>11</sup> Notably, Unwired never sought pre-judgement injunctions against any of the defendants.<sup>12</sup> (Keep in mind that the CJEU’s hearing on *Huawei v ZTE* was not heard until 11 September 2014.)

After the UK action commenced, throughout the time during which the infringement/validity trials occurred, and up to the time of the FRAND/competition trial, the parties continued to exchange offers; however, they were unsuccessful. Indeed, based upon the public record, it is fair to say that the negotiations that began in June 2013 and continued at least through mid-2016 (to the author’s knowledge),

<sup>7</sup>*Unwired Planet I* (n 1), paras 62–64.

<sup>8</sup>ibid, para 63.

<sup>9</sup>ibid, para 73.

<sup>10</sup>For purposes of this discussion, only the UK case is covered.

<sup>11</sup>*Unwired Planet I* (n 1), para 688.

<sup>12</sup>Potential rationales for this decision are discussed in Part three.

took the form of: offer, then very different counter-offer, repeatedly for the three year period, with no real progress towards a voluntary license.<sup>13</sup>

The High Court acted with its typical efficiency. Infringement and validity for the six patents in suit were to be litigated over the course of five trials beginning in October 2015 and July 2016.<sup>14</sup> The trial on damages (if any) and other economic issues would be heard beginning in October 2016. By early 2016, after three of the trials, Unwired had won two and lost one trial; of the four patents considered in the trials, two were found valid and infringed, and two were found invalid.<sup>15</sup> All of the judgements were under appeal at the time the court handed down judgement in the economic trial.<sup>16</sup>

As the parties were awaiting the court’s judgement in the third technical trial, the Unwired corporate group was in negotiations with another patent holding company, PanOptis Equity Holdings LLC (PanOptis), to sell the business. Unwired Planet’s patent holding companies remained intact, and became subsidiaries of PanOptis. It was decided that there was a sufficient record, with wins on two of the SEPs in suit, to proceed to the economic trial without the need to litigate additional technical trials. Samsung and Huawei agreed to take the two remaining technical trials off calendar.

Not long after the closing of the Unwired Planet-PanOptis transaction, Samsung settled with Unwired Planet in July 2016, leaving Huawei as the sole remaining defendant in the economic trial.

### **3 The *Unwired Planet* Judgements: What Do They Mean and What Do They Add?**

#### **3.1 The 5 April 2017 Judgement**

On 5 April 2017, Mr. Justice Birss handed down a judgement (the *Unwired Planet I*) that largely gave Unwired Planet the victory it had sought. The court evaluated the parties’ conduct, the testimony of each side’s experts, a number of comparable license agreements and then reached a number of conclusions. First, on the issue of what is a FRAND license rate, the court found that neither Unwired Planet nor Huawei’s offers during the three years of negotiations were ‘FRAND’ in his opinion.<sup>17</sup> It was possible to ascribe a specific relative value to the 2G, 3G and 4G patents in the Unwired portfolio which came out of the Ericsson portfolio, and the

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<sup>13</sup>*Unwired Planet I* (n 1), paras 70–82.

<sup>14</sup>Before the first technical trial, Google settled with Unwired Planet as to the SEPs, and did not participate further in the UK litigation. See *Unwired Planet I*, para 9.

<sup>15</sup>*Unwired Planet I* (n 1), para 9.

<sup>16</sup>*ibid.*

<sup>17</sup>*ibid.*, paras 807(1), (2).

court enumerated those values.<sup>18</sup> Of the various licenses suggested as ‘comparable,’ the court deemed the Ericsson-Huawei 2014 license and other Ericsson licenses as the best comparables.<sup>19</sup> A FRAND license should not be limited to the UK; it should be a worldwide license.<sup>20</sup>

Next, on the issue of competition law, the court studiously followed the CJEU’s *Huawei v ZTE* analysis to the facts of this case. Unwired Planet, as the holder of SEPs, is in a dominant position for purposes of applying competition law.<sup>21</sup> The court reviewed the applicability of the ‘hard-nosed non-discrimination’ and ruled that Unwired did not abuse their dominant position in seeking injunctive relief, seeking a worldwide license, by attempting to impose ‘unfair’ prices or by bundling SEPs and non-SEPs.<sup>22</sup> Because Unwired holds valid and infringed patents, and Huawei ‘have not been prepared to take a license on the terms I have found to be FRAND, and since Unwired Planet are not in breach of competition law,’ a final injunction was granted.<sup>23</sup>

### **3.2 The 7 June 2017 Judgement**

The 7 June 2017 judgement (the *Unwired Planet II*) is best described as a settling of accounts on open points related to matters resolved in the *Unwired Planet I* judgement. First, the court confirmed its ruling that Unwired Planet was entitled to an injunction unless Huawei entered the form of license as ordered by the court in April.<sup>24</sup> Second, the court awarded costs to Unwired Planet as the prevailing party.<sup>25</sup> Third, the court addressed specific arguments raised by the parties for purposes of positioning the case for their respective appeals.<sup>26</sup>

Really the most striking aspect of the *Unwired Planet II* judgement is the court’s decision to publish the full text (minus the actual rates) of what it calls the Settled License.<sup>27</sup> This may be a first in published patent judgements in Europe and the US. This precedent establishes an important milestone in promoting transparency of licensing terms for others negotiating FRAND licenses for SEPs. While the tables

<sup>18</sup>ibid, paras 807(4), (5), (8) and (9).

<sup>19</sup>ibid, para 807(6).

<sup>20</sup>ibid, para 807(11).

<sup>21</sup>ibid, para 807(16). In a point that will be covered below, the court prefaced its conclusion regarding Unwired’s being in a ‘dominant position’ by stating, ‘if a proper economic analysis had been done the answer might be different’.

<sup>22</sup>ibid, 807(17).

<sup>23</sup>ibid, para 807(18).

<sup>24</sup>*Unwired Planet II* (n 1), paras 3–4, 23, 25.

<sup>25</sup>ibid, paras 39–61. Huawei was ordered to pay £2.9 million out of Unwired Planet’s total £8.5 million in trial costs.

<sup>26</sup>ibid, paras 62–69.

<sup>27</sup>ibid, 16–40.

for the license fees remain blank in this license, anyone can import what the court has already adjudged to be FRAND rates—for Major Market, Other Markets (including China) and broken down even further by the various cellular standards set by ETSI (2G, 3G and 4G).

### ***3.3 FRAND—New Guidance from the Unwired Judgement***

A number of key issues were raised and resolved (at least preliminarily) in the High Court’s April and June 2017 judgements:

(1) What does ‘FRAND’ mean?

- Is FRAND a worldwide rate or just a national rate?
- Is a FRAND rate a range or a specific number?
- Is FRAND a value or a process?
- What does a FRAND license look like?

(2) How should the court evaluate FRAND in a particular context? Is a Top-Down or a Comparable License Analysis more reliable?

- Do FRAND offers and counter-offers inform whether the parties are acting reasonably?
- How do ‘comparable licenses’ inform whether the parties’ offers and counter-offers are FRAND (or not)?

(3) How should the court interpret ‘FRAND’ taking into account evolving telecoms standards?

These three interrelated issues and their sub-parts are explored in the following subsections.

#### **3.3.1 ‘FRAND’ Means Worldwide**

Patent owners, licensees and litigators have been asking courts in the UK, Germany, the US, India and elsewhere for clarity on the meaning of FRAND in both the valuation and procedural dimensions. Practically speaking, straightforward answers to this question and its component parts will guide negotiations normatively. Licensors and their counsel realize that failed negotiations likely will land the parties in court, where a judge will apply tests of fairness, reasonableness, and non-discrimination to the parties conduct. Assuming that parties want their conduct to be adjudged as reasonable, they will follow rules that are clearly stated.

In this respect, Mr. Justice Birss does not disappoint. In perhaps the judgement’s most important application of FRAND to a license for a multi-national portfolio of

SEPs being offered to a worldwide telecom vendor, FRAND means a *worldwide license rate*. The court begins its analysis by noting:

Aside from the rate, the question of scope is the most significant point in the case. The parties are diametrically opposed. Huawei are willing to take a licence under Unwired Planet's UK patent portfolio, but only the UK portfolio. Unwired Planet wish to grant a worldwide licence and contend that they are entitled to insist on it.<sup>28</sup>

The court then proceeds with a detailed, analysis of the facts and the law. Huawei makes and sells its equipment in multiple jurisdictions.<sup>29</sup> Patentee such as Unwired Planet should not be forced to chase an infringer in multiple jurisdictions to enforce its patent rights adequately. Otherwise, the purpose of the standard setting organization (SSO) and the FRAND commitment are undermined by the recalcitrant licensee. While a court may only have power to grant an injunction in the country in which that court resides, once it is determined that a SEP is valid and infringed, the court's coercive power may be used to impose a result that is extra-territorial.<sup>30</sup> Accordingly, the court...

...conclude[d] that a worldwide licence would not be contrary to competition law. Willing and reasonable parties would agree on a worldwide licence. It is the FRAND licence for a portfolio like Unwired Planet's and an implementer like Huawei. Therefore, Unwired Planet are entitled to insist on it.<sup>31</sup>

This is indeed a landmark ruling. No prior court had determined that FRAND is, by definition, a worldwide licensing scheme when the patentee's portfolio is worldwide in nature. Now that patentees and prospective licensees have this guidance, this should eliminate much of the haggling that characterized the Unwired Planet—Huawei negotiations.

### **3.3.2 FRAND—Top-Down and Comparable License Analyses: Is One Superior to the Other?**

A major point of contention between Unwired Planet and Huawei was the question of whether either party had offered a FRAND rate during negotiations.<sup>32</sup> To establish a framework for assessing the FRAND-ness of the parties' respective offers, the court considered two methodologies: the so-called 'top-down' approach and a review of comparable-licenses.<sup>33</sup>

<sup>28</sup>*Unwired Planet I* (n 1) 524.

<sup>29</sup>ibid, paras 525–572.

<sup>30</sup>ibid, para 562.

<sup>31</sup>ibid, para 572.

<sup>32</sup>ibid, para 151.

<sup>33</sup>ibid, paras 178–79.

*Top-Down Models—Only Good So Long as They Are Objective*

A generic top-down approach to determining FRAND licensing rates for SEPs starts by assuming the total royalty burden (or T for total) for a given standard, then determines a particular patentee’s proportionate share (or S for share) of the total based upon the fraction of the total number of patents applicable to the standard held by that patentee. Multiply T × S, and one should get the total royalty rate due to the patentee.<sup>34</sup> Both Unwired Planet and Huawei had devised top-down methodologies to get to the percentage of the total SEP pool held by the different patentees of note—Ericsson, Huawei, Nokia, Qualcomm, Samsung, and Unwired Planet among others.<sup>35</sup>

The court dissects, critiques and largely debunks many aspects of both the Unwired Planet MNPA and the Huawei HPA methodologies.<sup>36</sup> In short, Unwired’s claimed FRAND rate was too high and Huawei’s was too low.<sup>37</sup> As the lengthy analysis reflects, there are many reasons why these top-down approaches are infirm, some objective and mathematical, some more subjective. For example, a model like the MNPA tends to overstate the importance of SEPs in a smaller portfolio like Unwired Planet’s by virtue of how the MNPA calculates the ratio of ‘Relevant SEPs’ to the whole portfolio.<sup>38</sup> Furthermore, any top-down model that attempts to ascribe ‘importance’ or that claims to mathematically determine an ‘essentiality rate’ ultimately relies upon subjective judgement to define what is ‘important’ and what patents are ‘truly essential.’<sup>39</sup>

What motivates a party to build specific rationales into its top-down royalty model imposes yet another layer of subjectivity in the process. Knowing that motivation informs how trustworthy such a model is as a probative economic tool. Huawei first claimed that its HPA was undertaken to respond to the supposed flaws in Unwired Planet’s MNPA.<sup>40</sup> In fact, at a later point in the trial it was disclosed that the HPA was created as a filtering tool for one of Huawei’s experts to evaluate

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<sup>34</sup>ibid, para 178.

<sup>35</sup>Unwired Planet’s method is referred to as the Modified Numeric Proportionality Approach (MNPA) and Huawei’s is called the Huawei Patent Analysis (HPA) ibid, para 199. The MNPA was originally constructed by Unwired Planet for the purpose of determining what a reasonable royalty rate proposal would be for purposes of licensing discussions prior to the filing of any litigation. A revised MNPA was prepared specifically to submit as evidence in the economic trial.

<sup>36</sup>ibid, paras 198–371.

<sup>37</sup>ibid, paras 522 and 807(3).

<sup>38</sup>ibid, para 299.

<sup>39</sup>ibid, para 303. The court identifies other issues with the revised MNPA prepared for the trial.

<sup>40</sup>ibid, para 293.

patents during an earlier arbitration between Huawei and Ericsson—not to derive a FRAND license right.<sup>41</sup>

After analyzing the MNPA and the HPA, Mr. Justice Birss decided that neither generated completely accurate or legally satisfactory royalty rates.<sup>42</sup> However the two competing top-down approaches provided a cross-check against each other as well as a sanity check against the comparable license approach. This is one aspect of the judgement in which the court's conclusions appear inconsistent yet ultimately form the basis for its judgement. On one hand, although neither the Unwired Planet nor the Huawei method accurately reaches the correct royalty rate, the court finds they are somewhat consistent in defining a range of possible royalties.<sup>43</sup> So the judgement appears to say at one point that there is a range in which one can establish a FRAND rate.<sup>44</sup> However the court ultimately reverses course and states that a FRAND rate is a specific number.<sup>45</sup> So what is that rate? And absent a reliable top-down method, how does one determine that rate?

### *Comparable Licenses—Superficially Good but Problematic Idea*

Turning then to the comparable license approach as a way to answer that question, the court reviewed several licenses disclosed by the parties pre-trial.<sup>46</sup> It is difficult to fully compare these licenses or to comment on the court's findings specifically for the simple reason that the documents are confidential and the details of those licenses were redacted from the published opinion.<sup>47</sup> Indeed, anyone searching the April 2017 *Unwired Planet* judgement for useful data on which to understand the comparable licenses does so in vain. This section of the judgement might as well have been written in invisible ink.<sup>48</sup>

As best can be explained from the judgement, the parties and Ericsson had provided pre-trial disclosure of multiple license agreements. Not surprisingly, each

<sup>41</sup>ibid, para 341. Mr. Justice Birss was very critical of what he believed was an intentional misrepresentation by Huawei about this point in its pre-trial statement of the case:

The way the HPA was presented by Huawei in these proceedings in the FRAND Statement of Case was wrong and should not have happened ... What has happened is that the truth about how the HPA was devised and the reasons for it were not presented properly from the outset. Although more came out at trial I am not satisfied the full picture has been presented to the court.

<sup>42</sup>The process of determining reasonable royalty rates is covered in numerous law and economics journals. A good example of this perspective is provided by Contreras. Jorge L Contreras, 'A New Perspective on FRAND Royalties: Unwired Planet v Huawei' (2017) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2949449](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2949449)> accessed 10 November 2017 (Contreras).

<sup>43</sup>ibid, paras 261–264.

<sup>44</sup>ibid, para 501.

<sup>45</sup>ibid, para 807(8).

<sup>46</sup>ibid, paras 179–80.

<sup>47</sup>See, e.g., ibid, para 383, describing the 2014 Unwired Planet-Lenovo license, but redacting the royalty numbers.

<sup>48</sup>ibid, paras 383–468.

party argued that one or more licenses it disclosed were the better precedents on which to rely.<sup>49</sup> The court took evidence from the parties’ experts and eventually concluded that the 2014 license between Ericsson and Samsung is ‘the best place to start, but other Ericsson licenses are relevant.’<sup>50</sup> Using the data from these Ericsson licenses and from a separate analysis of Unwired Planet’s share of all SEPs, the court found that specific benchmark FRAND rates applied to Unwired Planet’s portfolio.<sup>51</sup>

For the reasons elaborated in Part four, it is unlikely that the data from any of these licenses could be helpful in assisting the court to establish what other licenses suggest are FRAND rates.

### 3.3.3 The Meaning of FRAND in Light of Evolving Standards

Another factor contributing to the complexity of the court’s valuation exercise is the manner in which telecommunications standards have evolved over time, and the impact of this evolution on FRAND rates. The court addresses this problem in part by noting how the Unwired Planet patents may apply in varying ways to the 2G, 3G and 4G standards.<sup>52</sup> A few challenges related to the evolution of the standards exist in establishing FRAND rates for Huawei’s different mobile phone products. Some phones are 2G/GSM only. Some are 2G and 3G/UMTS. Others also have 4G/LTE capabilities.<sup>53</sup> As the court observes, ‘it is impossible to be consistent’.

What the court never resolves is what happens over the life span of a multi-year license as an older standard becomes less used or eventually obsolete. And what happens to the value of the most current standard when industry deploys equipment based upon a new standard? One standard not at issue in the case, 5G, will be implemented during the first term of the expected Unwired Planet-Huawei license. Left hanging in the discussion of rates associated with specific standards is the question of the basis on which parties should set SEP royalty rates when the underlying standard is used less or become obsolete.

#### *The Competition Law Points—No News is Good News?*

Although the worldwide patent licensing community may have wanted a new elaboration of the path to seeking injunctive relief after *Huawei v ZTE* CJEU decision, the Unwired Planet I analysis of the competition law points does not so much fill in any gaps in the CJEU judgement as there are gaps to be considered.

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<sup>49</sup>ibid, paras 382–468.

<sup>50</sup>ibid, para 807(6).

<sup>51</sup>ibid, para 807(8).

<sup>52</sup>See, e.g., ibid, paras 770–771.

<sup>53</sup>ibid, para 5.

Mr. Justice Birss contributes a typically British common law jurisprudential interpretation when he states:

I am not persuaded that the CJEU in *Huawei v ZTE* sought to set out a series of rigid predefined rules, compliance with which is never abusive whereas deviation from which is always abusive, all regardless of the circumstances. Abuse of dominance is a serious matter and the court will have had well in mind that circumstances can vary.<sup>54</sup>

Put differently, the facts and circumstances matter. Therefore, given the facts of the case before the court, the main issues addressed that are of general interest to the licensing community are:

- (1) How does injunctive relief in this case fit into the analysis under the CJEU's 2016 *Huawei v ZTE* judgement?
- (2) Did the asserted SEP patents from Ericsson put Unwired in a dominant position, as defined by the CJEU's *United Brands* application of EU competition law, and did Unwired Planet abuse that dominant position?<sup>55</sup>
- (3) What effect, if any, did the 'bundling' of non-SEPs with the SEPs, have on the competition law issues?

#### *Injunctive Relief in Favor of Unwired Planet: Pre-trial Notification*

Huawei argued at trial against an injunction prohibiting it from selling its phones on the grounds that Unwired Planet abused its dominant market position and had not offered a FRAND rate for the UK before initiating litigation.<sup>56</sup> The dominant position element of the argument is discussed in the next part. The court acknowledges that Unwired Planet did not provide its FRAND terms to Huawei before bringing the claims in the case, but did so within a very short time after commencing the proceedings.<sup>57</sup> Indeed, the court recognizes that Huawei is a 'sophisticated organization well versed in technology and licensing',<sup>58</sup> and there had been plenty of prior contact between the parties and Ericsson, so Huawei was hardly caught off-guard when Unwired Planet commenced proceedings seeking as one form of relief an injunction on sales of infringing products.<sup>59</sup> The main point here is that the court will not let a large recalcitrant licensee try to use a strict construction of the *Huawei v ZTE* judgement to avoid a common sense interpretation of the factual history.

The court also distinguished the German line of cases that followed *Huawei v ZTE* based upon the German and English courts' fundamentally different

<sup>54</sup>ibid, para 741.

<sup>55</sup>Case 27/76 *United Brands v Commission* [1978] ECR 207.

<sup>56</sup>*Unwired Planet I* (n 1), paras 747, 793.

<sup>57</sup>ibid, para 753.

<sup>58</sup>ibid, para 750.

<sup>59</sup>ibid, para 748.

approaches to patent infringement proceedings. Because German courts try infringement and validity separately (infringement first), and patentees are entitled to injunctive relief upon finding of infringement but before validity is tried, it matters much earlier in the German system whether an injunction is issued at the end of the infringement trial.<sup>60</sup> But in Unwired Planet, not only did the patentee not seek a pre-judgement injunction, it was willing to forego injunctive relief entirely if Huawei was ordered to pay fair royalties.

#### *Abuse of Dominant Position*

For recalcitrant licensees, the *Unwired Planet I* may be a case of bad facts making bad law. The court held that while Unwired Planet’s efforts to license SEPs put it in a dominant position, the patentee did not abuse its position based upon the facts before the court.<sup>61</sup> Unwired Planet did seek injunctive relief if Huawei persisted in its unwillingness to enter into a FRAND license.<sup>62</sup> Unwired Planet consistently maintained its position that it was willing to enter a ‘FRAND’—meaning worldwide—portfolio license.<sup>63</sup> However ‘Huawei have never made an unqualified commitment to enter into a FRAND license.’<sup>64</sup> As noted in Part 3.3.1 above, the court determined that on the facts of the case, a FRAND license was a worldwide portfolio license.<sup>65</sup> Huawei would only agree, though, to a patent-by-patent license for any patent found valid and infringed—in the UK.<sup>66</sup>

Huawei’s nit-picky approach and non-standard approach to FRAND licensing did not impress the court. The court reviewed nearly the entire course of the parties’ negotiations dating from 2013 to 2016.<sup>67</sup> Time-after-time Huawei refused to engage with Unwired Planet on a worldwide portfolio license basis. As the court determined that only a worldwide license is FRAND in these circumstances, and so Huawei never came close to meeting its obligations under the *Huawei v ZTE* framework. Thus the court gave Huawei no deference and found that Unwired Planet had not abused its position as a SEP-holder in connection with its action to obtain injunctive relief.

The court also found that there is no mathematical benchmark to define unfair or excessive pricing.<sup>68</sup> There is no alignment of what a FRAND price might be and

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<sup>60</sup>ibid, paras 713–15.

<sup>61</sup>ibid, para 807(17).

<sup>62</sup>ibid, para 706.

<sup>63</sup>ibid, para 750.

<sup>64</sup>ibid, para 754.

<sup>65</sup>ibid, para 752.

<sup>66</sup>ibid, para 706.

<sup>67</sup>ibid, paras 678–706.

<sup>68</sup>ibid, para 756.

what constitutes unfair pricing under Article 102(a).<sup>69</sup> While Unwired Planet's price proposals might have been higher than a proper FRAND rate (Justice Birss found that they were), it does not necessarily mean that those offers, which were made for negotiation purposes violated Article 102(a). Accordingly, the court rejected Huawei's case on unfair competition based upon competition law.<sup>70</sup>

#### *Bundling SEPs, Non-SEPs*

Little Unwired Planet helped its cause considerably when the much-bigger Huawei demanded that SEPs and non-SEPs be separated for licensing purposes, and Unwired Planet did so.<sup>71</sup> 'These are not the actions of a party trying to use its market power' by bundling SEPs and non-SEPs.<sup>72</sup> The court rejected the bundling argument with ease. This specific argument is an excellent example of how the court looked deeply into the actual facts presented at trial and resisted an overly formulaic application of the *Huawei v ZTE* abuse of market dominance analysis to reach a reasoned conclusion.

## **4 Unwired Planet's Significance Going Forward: Points for Consideration**

### **4.1 FRAND Means Worldwide**

Perhaps the best news for practitioners is the court's determination that in a worldwide industry with patents granted in multiple jurisdictions, and with products across the planet, a FRAND license is, *de facto*, a worldwide rate. This is a particularly good precedent for patentees who have had to chase unwilling licensees around the planet in order to achieve patent peace. Although this aspect of Unwired Planet I is currently under appeal, it seems unlikely that the court of Appeal will overturn this part of the judgement. Mr. Justice Birss' explanation that sophisticated companies such as Huawei should expect to take a worldwide license is practical. And his mechanism for enforcing a worldwide FRAND license is clever – he states simply that he will enjoin sales of Huawei products in the UK if they do not comply with his order. In other words, his enforcement is strictly territorial.

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<sup>69</sup>ibid, para 757.

<sup>70</sup>ibid, para 784.

<sup>71</sup>ibid, para 790.

<sup>72</sup>ibid, para 790.

At least one commentator disagrees with the concept that for SEPs in the cellular technology field, FRAND terms necessarily mean a worldwide portfolio license.<sup>73</sup> Choudhry argues against this result because he disagrees with the concept of portfolio licensing in general. Portfolio licenses disregard differences in claims between patents granted in different countries and because patents expire.<sup>74</sup> This critique is superficial and inaccurate in at least three practical respects. First, all of the major licenses between parties in the cellular industry reviewed by the *Unwired Planet* court are portfolio licenses, including SEPs and non-SEPs. The argument that licenses should be negotiated only after infringement and validity are court-tested is an un-economic approach to licensing. In that model, the only parties sure to profit from testing patents are the patent litigation solicitors and barristers.<sup>75</sup>

Second, the differences between SEPs granted in different countries are largely irrelevant. If the parties negotiate a consensual license, they implicitly concede that the licensee is practicing the standard. Any critique on this point ignores the business imperative to conclude reasonable license deals in order to avoid costly litigation.

Third, portfolio licenses are generally written to avoid the pitfalls and expense of valuing individual patents that come into existence and that expire during the license period. A typical patent license would grant the licensee rights to use, manufacture, etc. the invention(s) described in the portfolio in the designated field of use during the term of the license. It is further understood that patents may be added to the portfolio during that time as well as that some patents may expire. But the scope of the license permits the licensee to obtain patent peace during the term of the agreement. This is why licenses in the cellular industry have five to seven year terms. Everyone understands that standards change, and therefore the SEPs in the portfolio will have increasing or decreasing value depending upon the standard to which they read.

For all of these reasons a FRAND license needs to be a worldwide portfolio license.

## 4.2 *FRAND Should Be a Range, not a Fixed Number*

Where the *Unwired Planet I* judgement veers off course is the determination that FRAND is a fixed number. Several points raised in the judgement support this view. As the court notes, at least three rates comprise what one would deem the

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<sup>73</sup>See Rajiv K Choudhry, ‘A Critique of the Decision in Unwired Planet v Huawei’ (*Spicy IP*, 2017) <<https://spicyip.com/2017/04/a-critique-of-the-decision-in-unwired-planet-v-huawei.html>>.

<sup>74</sup>ibid.

<sup>75</sup>Indeed, the consequence of the overly-litigious approach to patent licensing has now surfaced in the Unwired Planet-Huawei dispute. Dissatisfied with the outcome in the UK, Huawei has now initiated proceedings in China, and Unwired Planet has responded by bringing a claim in Mexico.

‘FRAND rate’: the benchmark rate,<sup>76</sup> the ‘Major Markets’ rate and the ‘Other Markets (including China)’ rate.<sup>77</sup> While one might interpret each rate to be a fixed number, the reality is that no single rate is a FRAND rate. Thus by the court’s own reasoning, a FRAND rate spans a range. The court even accepts the broad statement that

‘different prices and terms are ubiquitous in real-world markets, which means that the practical scope of a strict non-discrimination rule would enormous’ and ‘the impracticality of rules that would insist on uniform prices and terms is obvious.’<sup>78</sup>

In addition, the court finds that competition law ‘does not seek to prohibit different prices being charged to different customers.’<sup>79</sup>

Contreras agrees that a FRAND range, not a fixed rate, is a more practical rule.<sup>80</sup> A FRAND range is in keeping with how parties conduct the standards-setting process and creates a more definite framework for assessing parties’ compliance with their FRAND commitments. A range also allows licensors to take into account the size of the licensee, the location, the types of applications the licensee will have for the invention, and a host of other variables.

#### **4.3 Transparency Is the Key to Meaningful Application of FRAND**

Ultimately, the only way for licensing parties and their lawyers to know whether a particular offer is FRAND is for there to be greater transparency in the system. Greater access to data that shows exactly what the market rates for licenses to SEPs have been will assure that parties are giving and getting non-discriminatory rates that are, according to market pressures, fair and reasonable. No longer could it be alleged in a virtual vacuum that a licensor’s rates are greatly in excess of FRAND and violate competition law. Similarly, allegations that unwilling licensees’ proposed rates are too low could be held to a widely known measuring stick.

However, that degree of transparency is unlikely to happen in today’s global SEP licensing market.<sup>81</sup> Licensors and licensees each want to be able to claim that they have gotten the better end of the deal in a given situation. So, they write the licenses in a manner most likely to give both parties to the agreement the maximum flexibility in making their arguments. This phenomenon remains the most

<sup>76</sup>ibid, para 807(8).

<sup>77</sup>See ibid, para 807(13).

<sup>78</sup>ibid, para 492, citing Robert O’Donoghue and Jorge Padilla, *The Law and Economics of Article 102 TFEU* (2nd edn, Hart 2013), ch 15.1.

<sup>79</sup>ibid, para 501.

<sup>80</sup>Contreras (n 42) 3.

<sup>81</sup>The one exception to this opacity is patent licensing pools, such as those that exist for Blu-Ray licensing. The pools will publish rates and other terms, and any licensee is welcome to take a license on those terms.

solution-resistant aspect of modern patent licensing practice. Given the enormous financial stakes—hundreds of millions of US dollars annually—there are huge incentives not to promote transparency.

## 5 Conclusion

Mr. Justice Birss’ judgement in *Unwired Planet v Huawei* thoughtfully establishes new law on several key points related to licensing SEPs in the context of the FRAND commitments and reaffirms the basic procedural competition law requirements announced in the CJEU’s *Huawei v ZTE* judgement. Most importantly, FRAND licenses are worldwide licenses when the parties have multinational portfolios and operate in a global industry. While his rationale may not withstand scrutiny by the Court of Appeal in London, Justice Birss defines a FRAND rate as a specific rate, not a range. This seems contrary to practice and to the principles of competition law, and is also contradicted in part by the *Unwired Planet I* judgement. What would be most helpful, but very elusive, is an opening up of the process so that participants are able to see what prevailing license rates for SEPs are in the market. That would settle the matter with great certainty. However, the incentive to continue cloaking the process with secrecy remains too great.

**Disclosure** From June 2015 to July 2016, Mr. Mesel was the General Counsel of Unwired Planet, Inc. The opinions and analysis in this chapter are those of the author and do not necessarily reflect those of Unwired Planet.

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# Chapter 7

## Evolving *Huawei* Framework: SEPs and Grant of Injunctions



**Indranath Gupta, Vishwas H. Devaiah, Dipesh A. Jain  
and Vishal Shrivastava**

### 1 Introduction

There have been certain developments with the emergence of the European Commission's Communication Paper (EC paper) titled 'Setting out the EU approach to Standard Essential Patents'.<sup>1</sup> The EC paper, which was addressed to the European Parliament, reflected upon the broad contours of the licensing of standard essential patents (SEPs) in the age of Internet of Things (IoT). It identified the difficult phases including granting of injunctions in the process of licensing the SEPs.

The *Huawei* case decided by the Court of Justice of the European Union (CJEU) had in fact proposed a framework for the SEP holder before a claim could be raised for an injunction.<sup>2</sup> The chapter identifies such framework as suggested by CJEU in the *Huawei* judgement with further reference to cases that have been decided in

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<sup>1</sup>European Commission, 'Setting out the EU approach to Standard Essential Patents' COM (2017) 712 final (EC Paper) <<https://ec.europa.eu/docsroom/documents/26583>> accessed 10 January 2018; Roundtable on Digitising European Industry with Commissioner Oettinger (Roundtable) 20 September 2016 <[http://ec.europa.eu/information\\_society/newsroom/image/document/2016-39/160913\\_background\\_document\\_17339.pdf](http://ec.europa.eu/information_society/newsroom/image/document/2016-39/160913_background_document_17339.pdf)> accessed 10 May 2018.

<sup>2</sup>Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp.* EU:C:2015:477.

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Germany and in the UK. While there is a general adherence to the framework identified in *Huawei*, subsequent cases have helped in developing the framework further. There have been cases of inconsistencies and it seems that the issue of overall conduct of the parties in the negotiation process becomes crucial before deciding the grant of injunctions in the licensing of SEPs. Towards that end, the first part of the chapter considers the EC Paper followed by the second part identifying the framework proposed in the *Huawei* judgement. The third part, which includes cases from Germany and UK, reflects on the changes that are happening in relation to the framework developed in the *Huawei* judgement.

## 2 EC Communication Paper to the European Parliament

The EC paper was made with the objective of reducing the uncertainty already existing in the current SEP regulatory environment for the development of IoT products in the near future.<sup>3</sup> The EC paper identified several concerns related to SEPs that require immediate attention so that the potential growth seen in IoT sector is not hindered due to the issues that have emerged in the Information and Communications Technology (ICT) sector.<sup>4</sup> The EC paper has rightly pointed out that these uncertainties would be sensitive given that ‘players coming from new industrial sectors’ emerge as they would have no prior experience of dealing in ICT technologies.<sup>5</sup>

As per the EC paper, the unclear and diverging interpretations of fair, reasonable, and non-discriminatory (FRAND) hampered the licensing process.<sup>6</sup> Moreover, there is a need to provide a stable licensing environment to be able to guide parties in their negotiations.<sup>7</sup> The EC paper identifies negotiations in SEP licensing as an important step in furthering the above objectives.<sup>8</sup> Any potential delay in such negotiations might delay the use of standard technologies. This may result in hampering the development of interconnected products in Europe further affecting the competitiveness of the European Union’s (EU) economy. Failed negotiation is one of the major reasons for the increase in SEP disputes.

To this end, the EC paper discussed *inter alia* the obligations cast upon parties during pre-licensing negotiations for licensing of SEPs on FRAND terms.<sup>9</sup> The EC paper has derived such obligations from the behavioral criteria as determined in the *Huawei* judgement.<sup>10</sup> The EC paper provides that parties are best placed to arrive at

<sup>3</sup>EC Paper (n 1) 2.

<sup>4</sup>ibid 2.

<sup>5</sup>ibid 2.

<sup>6</sup>ibid 6.

<sup>7</sup>ibid 6.

<sup>8</sup>ibid 6–7.

<sup>9</sup>ibid, para 3.1.

<sup>10</sup>ibid, para 3.1; *Huawei* (n 2).

a common understanding of what are fair licensing conditions and fair rates by indulging in good faith negotiations.<sup>11</sup>

### 3 Steps Prior to Granting Injunctions in SEP Cases

In case the parties are not able to negotiate a licensing deal and at the same time, the implementer continues to make use of the SEPs, then the SEP holder, having left with no other option, would most likely file a case seeking an injunction on the infringement and for appropriate royalty. Further, the implementers might take a defense that the SEP holder is abusing his dominant position in the market. The courts will then have to rule on these issues while assessing the negotiations that took place between the SEP holder and implementer.

#### 3.1 *The Huawei Guidelines*

The CJEU in *Huawei* talks about the ideal behavior of SEP holder and implementer in negotiation process.<sup>12</sup> The case sets out certain expectations, which an SEP holder is expected to follow before making itself eligible to file an action for seeking injunction for patent infringement or for recall of products against the alleged infringer without violating Article 102 of TFEU.<sup>13</sup> In the process, *Huawei* also recommends the standards implementer to follow certain steps before relying on the plea of abuse of dominant position by the SEP holder. The *Huawei* case has only provided instances where the actions of the SEP holder will amount to an abuse and it does not go beyond that.<sup>14</sup> The CJEU has failed to take into consideration the possibility that the SEP holder might be abusing its dominant position even if it notifies the implementer.<sup>15</sup>

At the outset, the patent holder should raise a complaint about the infringement by notifying the implementer about the SEPs that are infringed and the manner in which they are infringed (Notice Stage).<sup>16</sup> As a second step, the SEP holder should present a specific offer to the implementer to conclude a licensing agreement on FRAND terms including amount of royalty and details of its calculations (Offer stage).<sup>17</sup> This step is subject to express willingness on the part of the implementer to

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<sup>11</sup>EC Paper (n 1), para 2.

<sup>12</sup>*Huawei* (n 2).

<sup>13</sup>ibid.

<sup>14</sup>*Unwired Planet v Huawei* [2017] EWHC 711, para 44.

<sup>15</sup>ibid, para 744.

<sup>16</sup>*Huawei* (n 2), para 61.

<sup>17</sup>*Huawei* (n 2), para 63.

enter into negotiations with the SEP holder and conclude the licensing agreement on FRAND terms.<sup>18</sup>

As a third step, the implementer should respond to the specific offer extended by SEP holder in good faith and in a diligent manner, keeping in mind the recognized commercial practices, thereby refraining from any delaying tactics (Response Stage).<sup>19</sup> Such response can be in the form of an acceptance, enquiry, counter offer or rejection.

The fourth step provides that in case the implementer wants to rely on ‘abusive nature of an action of prohibitory injunction or for the recall of products’, it can do so but only after it has submitted to the SEP holder, a specific counter offer that corresponds to FRAND terms (Counter offer stage).<sup>20</sup> If the implementer has been using the SEP before a licensing agreement has been concluded, then it should provide appropriate security, in accordance with the recognized commercial practices from the point when its counter offer was rejected.<sup>21</sup>

If the parties fail to reach an agreement on FRAND terms, they may decide to approach an independent third party for determining the amount of royalty.<sup>22</sup>

While the *Huawei* ruling offered a general framework of expectations, there were issues, which remained unanswered requiring further clarifications.

The *Huawei* ruling recommended the SEP holder to make an offer to a willing implementer to take the license on FRAND terms. Consequently, if the implementer shows unwillingness, then the SEP holder would have no other choice but to file a legal action for infringement and other necessary remedies such as recall of products, unpaid royalties, or for determination of royalty rates by court. The point of contention in many cases have been the reasonable period within which the communication of willingness by an implementer is expected. *Huawei* also left unclear as to what would constitute adequate or sufficient willingness.

At the stage of extending an offer, the contents of such offer should relate to the undertaking given to an SSO. For instance, the European Telecommunications Standards Institute’s (ETSI) Intellectual Property Rights Policy requires SEP holder to sign an undertaking stating that it is prepared to license the patents included in the standard on FRAND terms to willing licensees.<sup>23</sup> Additionally, *Huawei* requires an offer to specify the amount of royalty and details mentioning the calculation of royalty rates.<sup>24</sup> The judgement does not provide much clarity about the extent of comprehensiveness of information present in such offer.

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<sup>18</sup>*Huawei* (n 2), para 63.

<sup>19</sup>*Huawei* (n 2), para 65.

<sup>20</sup>*Huawei* (n 2), para 67.

<sup>21</sup>*ibid.*

<sup>22</sup>*Huawei* (n 2), para 68.

<sup>23</sup>European Telecommunications Standards Institute, ‘ETSI Intellectual Property Rights Policy’ (2017) <<http://www.etsi.org/images/files/ipp/etsi-ipr-policy.pdf>> accessed 10 May 2018.

<sup>24</sup>*Huawei* (n 2), para 63.

At the stage of responding to the offer, going by recognized commercial practices the response of an implementer can range from (i) accepting the offer as it is, (ii) rejecting the offer, (iii) making further enquiries or negotiating an NDA or pricing, and (iv) making a counter offer. It may be implied from *Huawei* that an implementer opting for any of the four steps must do so (i) diligently, (ii) in accordance with recognized commercial practices in the industry, (iii) in good faith, and (iv) without adopting any delaying tactic.<sup>25</sup> *Huawei* specifies that in case the implementer chooses to reject the offer made by the SEP holder, it must make a specific counter offer on FRAND terms to defend itself from future legal actions initiated by the SEP holder.<sup>26</sup> In this context, even while making enquiries about the offer extended by the SEP holder there is ample opportunity for an implementer of technology to prolong the whole process of negotiation by using dilatory conduct.

In a commercial transaction, there can be multiple cycles of offer, counter offers or enquiries before an agreement can be reached between the parties. However, this aspect of business negotiation was not considered in *Huawei*.

Some of the above issues were taken up and discussed by the courts in the member states. Part 3.2 discusses the clarifications and different interpretations emerging from post-*Huawei* cases in Germany.

### **3.2 *Implementation of Huawei Guidelines in Subsequent SEP Cases***

*Huawei* judgement resulted when the Dusseldorf court wanted a clarification from the CJEU about existing standards in form of the *Orange Book Standard*<sup>27</sup> or the more advanced approach set by the European Commission in its *Samsung* and *Motorola* decisions.<sup>28</sup>

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<sup>25</sup>“... it is for the alleged infringer diligently to respond to that offer in accordance with recognized commercial practices in the field and in good faith, a point which must be established on the basis of objective factors and which implies, in particular, that there are no delaying tactics”; *Huawei* (n 2), para 65.

<sup>26</sup>*Huawei* (n 2), para 66.

<sup>27</sup>Case No. KZR 39/06O *Orange-Book-Standard* Bundesgerichtshof, Judgement dated 6 May 2009.

<sup>28</sup>C(2014) 2891 final *Case AT.39939—Samsung—Enforcement of UMTS standard essential patents*, European Commission’s decision dated 29 April 2014; C(2014) 2892 final *Case AT.39985—Motorola—Enforcement of GPRS standard essential patents*, European Commission’s decision dated 29 April 2014.

The *Huawei* guidelines covering the concept of willingness and negotiation process have been considered in several cases in Germany.<sup>29</sup> Courts in Germany have considered the obligations expressed under *Huawei* and broadly looked at the steps of the negotiation process. The Regional Court in Dusseldorf provided that action of notice is to be understood as service by which information about subsequent legal action is given. It does not depend on the submission but on the service of the action.<sup>30</sup> Although the decision provided by the CJEU in *Huawei* provides a general framework for SEP owners looking for injunctive relief, overall, the decision has led to various interpretations by German courts because of absence of precise direction or formal requirements in the *Huawei* framework.

The first step under the *Huawei* framework is to ensure that SEP holders reach out to the implementer or alleged infringer and inform them regarding their acts of infringement.<sup>31</sup> The German courts in cases like *Pioneer v Acer*,<sup>32</sup> *Saint Lawrence v Vodafone*,<sup>33</sup> *Sisvel v Haier*,<sup>34</sup> granted SEP holders a ‘transition time period’ as these were the cases, which were filed prior to the decision in *Huawei*, during which the SEP holders did not apply the formal requirements of *Huawei*.<sup>35</sup> In such ‘transitional cases’, the infringement notice, even though served later after the complaint for infringement was filed, would be considered as sufficient notice. It was the reasoning of German courts that it would be wrong to retrospectively fault the SEP holder for not having given notice, and where the parties have progressed to offer and counter offer steps.<sup>36</sup> The notice is served for informational purpose and in transitional cases, the courts found the knowledge of implementer about SEP was undisputable at a stage where the legal proceedings have already started.<sup>37</sup>

The Dusseldorf court in *Pioneer v Acer* suggested that the *Huawei* framework should not be understood as a purely formal criteria, but as a behavioral test to

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<sup>29</sup>Case No. 4a O 93/14 *Sisvel v Haier* (2015) LG Dusseldorf; Case No. 2 O 106/14 *Saint Lawrence v Deutsche Telekom* (2015) LG Mannheim; Case No. 4a O 74/14 *Saint Lawrence v Vodafone* (2016) LG Dusseldorf; Case No. 7 O 66/15 *NTT DoCoMo v HTC* (2016) LG Mannheim; Case No. 7 O 96/14 *Pioneer v Acer* (2016) LG Mannheim, Judgement dated 8 January 2016; Case No. 7 209/15 *Philips v Archos* (2016) LG Mannheim.

<sup>30</sup>Case No. 4a O 126/14 *Saint Lawrence v Vodafone* LG Dusseldorf, Judgement dated 31 March 2016, para 35.

<sup>31</sup>*Huawei* (n 2), para 61.

<sup>32</sup>*Pioneer* (n 29), para 94.

<sup>33</sup>*Saint Lawrence* (n 30), para 232.

<sup>34</sup>Case No. 4a O 144/14 *Sisvel v Haier* (2015) LG Dusseldorf, Judgement dated 3 November 2015, 29.

<sup>35</sup>*Pioneer* (n 29); *Saint Lawrence* (n 29); *Sisvel* (n 34).

<sup>36</sup>Jorge Contreras, *The Cambridge Handbook of Technical Standardization Law* (Cambridge University Press 2017) 427.

<sup>37</sup>*ibid* 427.

ensure that the parties, which assert themselves to be willing to license or take a license under FRAND conditions verbally, are serious.<sup>38</sup>

The *Huawei* guidelines covering the concept of willingness and negotiation process have been considered in several cases in Germany.

The German courts have clarified the requirement of notice of infringement. The LG Mannheim court in *NTT DoCoMo* and *Pioneer* suggested that the SEP holder should inform the implementer about the infringement by way of identifying and specifying the SEPs in question.<sup>39</sup> The Regional Court in *NTT DoCoMo* notes that the notice must make it clear to the implementer about the standard and the circumstances leading up to the infringement.<sup>40</sup> The court also remarked that the details of a notice can be decided on a case-by-case basis.<sup>41</sup> With regard to the information relating to the SEP in question, the Dusseldorf court in *Saint Lawrence v Vodafone* suggested that at least the publication number of the patent in dispute and the alleged use should be mentioned in the notice.<sup>42</sup> The Dusseldorf court further stated that, to comply with the *Huawei* framework relating to the requirement of notice of infringement ‘before bringing the action’, the SEP holder must send such a notice before the filing of the claim, and at least before the advance payment on costs has been made by the SEP holder to the court for the injunction.<sup>43</sup>

Once the SEP holder has given notice to the implementer, it becomes the duty of the implementer then to respond to that notice and show willingness to engage in negotiations to obtain a license. Such response must be given within a reasonable period. In cases like *Saint Lawrence v Deutsche Telekom*, *Sisvel v Haier* and *Saint Lawrence v Vodafone*, the court took note of the time taken to respond to the notice from the SEP holder.<sup>44</sup> In *Deutsche Telekom*, the court ruled that the period of more than three months was too long for showing willingness to license.<sup>45</sup> Further, in *Saint Lawrence v Vodafone*, it was the Regional Court’s view that the implementer is required to declare his willingness to enter into a licensing agreement immediately and in this situation, the delay of five months was considered too long.<sup>46</sup> The Regional Court in *Saint Lawrence v Vodafone* also suggested that the timeline before declaring a licensee ‘unwilling’ will depend on specific circumstances of a case and the information given by the SEP holder in the notice of infringement must also be taken into account.<sup>47</sup> For instance, the expectation of timely response to declare ‘willingness’ by an implementer would depend on the details provided in the notice

<sup>38</sup>*Pioneer* (n 29), para 87.

<sup>39</sup>*NTT DoCoMo* (n 29), para 57; *Pioneer* (n 29), para 74; *Huawei* (n 2), para 61.

<sup>40</sup>*NTT DoCoMo* (n 29), para 57.

<sup>41</sup>*ibid*, para 57.

<sup>42</sup>*Saint Lawrence* (n 30), para 219.

<sup>43</sup>*ibid*, para 223.

<sup>44</sup>*Deutsche Telekom* (n 29); *Sisvel* (n 34); *Saint Lawrence* (n 30).

<sup>45</sup>*Deutsche Telekom* (n 29).

<sup>46</sup>*Saint Lawrence* (n 30).

<sup>47</sup>*ibid*, para 245.

of infringement.<sup>48</sup> In *Pioneer v Acer*, the court suggested that the overall behavior of the implementer or its parent company was not favorable to the *Huawei* guideline.<sup>49</sup> In *Sisvel v Haier*, the Higher Regional Court decided that the question of willingness should be decided bearing in mind the licensee's overall conduct during the licensing procedure.<sup>50</sup> Once the implementer gives adequate and unconditional willingness to take a licence on FRAND terms, it is for the SEP holder to provide to the implementer an offer containing the royalty and details of its calculations.<sup>51</sup>

The Regional Court of Dusseldorf, while determining whether the offer given by an SEP holder corresponds to FRAND terms, held that comparable license agreements are a significant indicator of the adequacy of offered license conditions. Similarities in licensing conditions create a stronger presumption that royalties offered by the SEP holder complied with FRAND requirement.<sup>52</sup> The courts have favored looking at the licenses of same quality and scope to make a comparison of the FRAND aspect of the offer. On the issue of royalty rate the Regional Court in *Saint Lawrence v Vodafone* further stated that there is no need for the SEP holder to provide a mathematical derivation of the royalties, as there is no single royalty that is solely considered as FRAND, rather a range of values will be fair, equitable and non-discriminatory.<sup>53</sup> It must be sufficient for the SEP holder to specify the essential considerations that constitute the licensing fees.<sup>54</sup> According to the Higher Regional Court of Karlsruhe, the SEP owner has a wide discretion in determining the FRAND conditions.<sup>55</sup> The court in *Philips*, provides that an offer cannot be termed as FRAND if the method of calculation of royalties is not comprehensible.<sup>56</sup>

Once the SEP holder has issued an offer, which encompass FRAND norm, it is the duty of the implementer to react promptly without adopting any delaying tactics.<sup>57</sup> The Regional Court of Mannheim in *Pioneer* provides that the implementer must react to an offer, even if it does not comply with FRAND norm.<sup>58</sup> In some instances, the courts have refused to determine whether the offer made to an implementer followed the FRAND norm when the implementer has failed to demonstrate willingness to conclude the license on FRAND terms.<sup>59</sup> A similar approach was adopted in *Sisvel v Haier*.<sup>60</sup> The courts have decided *Sisvel v Haier*

<sup>48</sup>ibid, para 252.

<sup>49</sup>*Pioneer* (n 29).

<sup>50</sup>Case No. I-15 U 66/15 *Sisvel v Haier* OLG Dusseldorf, Judgement dated 13 January 2016.

<sup>51</sup>*Huawei* (n 2), para 63.

<sup>52</sup>*Saint Lawrence* (n 30), para 267.

<sup>53</sup>ibid, para 314.

<sup>54</sup>ibid, para 313.

<sup>55</sup>Case No. 6 U 58/16 2016, OLG Karlsruhe Resolution of 8 September 2016, para 36.

<sup>56</sup>*Philips* (n 29), para 112.

<sup>57</sup>*Huawei* (n 2), para 65.

<sup>58</sup>*Pioneer* (n 29), para 77.

<sup>59</sup>ibid; *Sisvel* (n 34).

<sup>60</sup>*Sisvel* (n 34) 30.

based on the response of the parties by looking into their behavior or on the nature of response given by the implementer. In *Saint Lawrence v Deutsche Telekom*, the court ruled that a restrictive counter offer would not correspond with FRAND conditions because the implementer instead of responding to the offer for a worldwide license, restricted its offer only to Germany.<sup>61</sup> In fact, the absence of an indication of the royalty rate in the counter offer will not constitute a ‘concrete counter offer’.<sup>62</sup> The reasoning behind such qualification as given by the Mannheim Regional court is that the implementer will not be able to furnish guarantee during the negotiations because of absence of a fixed rate.<sup>63</sup> The court in *NTT DoCoMo v HTC* considered that the implementer failed in its obligation to react by means of a written counter offer as it was sent more than one and a half years after the SEP holder had sent the offer.<sup>64</sup>

Negotiation is a continuous process and there need not be a counter offer directly after an offer is made by the SEP holder. There could be a possible stage where an implementer can raise an inquiry on the offer of SEP holder or out rightly reject the offer. The *Huawei* guidelines provide that if the SEP holder rejects the counter offer of the implementer, the latter must deposit appropriate security, in accordance with recognized commercial practices.<sup>65</sup> Following the *Huawei* guidelines, there have been instances where the courts have highlighted the importance of depositing appropriate security to the SEP holder within reasonable time. In *Sisvel v Haier*, the court took note of the fact that even after the rejection of counter offer the implementer never rendered an account on a timely basis or provided security as per the *Huawei* guidelines.<sup>66</sup> The court was of the view that by merely providing counter offers, implementers are not absolved from their responsibilities towards the SEP holder.<sup>67</sup> This obligation arises from the point when the first counter offer is rejected.<sup>68</sup> The court in the *Sisvel* case considered that a time of around one year from the rejection of the counter offer was late for providing security and rendering of accounts. The court recommended that the *Huawei* requirement ‘from the time its counteroffer was rejected’ must be interpreted in a narrow manner.<sup>69</sup> A delay in rendering of accounts and security seems to be an expression of delaying tactic.<sup>70</sup> In *Pioneer*, the court stated that the implementer must show all seriousness towards

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<sup>61</sup>*Deutsche* (n 29), para 59.

<sup>62</sup>ibid, para 59.

<sup>63</sup>ibid, para 232.

<sup>64</sup>*NTT DoCoMo* (n 29), para 73.

<sup>65</sup>*Huawei* (n 2), para 67.

<sup>66</sup>*Sisvel* (n 34) 33.

<sup>67</sup>ibid 33.

<sup>68</sup>ibid 32.

<sup>69</sup>ibid 33.

<sup>70</sup>ibid 33.

taking the license.<sup>71</sup> This includes providing security, which is necessary after the rejection of the counter offer and may result in invalidating antitrust claims.

### **3.3 The Judgement in Unwired Planet**

*Unwired Planet v Huawei* has tried to deal with unresolved FRAND issues and competition concerns in SEP licensing disputes.<sup>72</sup> The court dealt with abuse of dominant allegations against the SEP holders in the market by assessing the FRAND licensing terms and by proceeding with the ambitious task of determining a global FRAND royalty rate. The court while trying to assess FRAND stated that determining what a willing licensor and a willing licensee should do in the relevant circumstances would help in deciding the question. Justice Birss has termed the entire concept of FRAND as a process and discussed the pre-licensing behaviour of licensing parties. He stated that FRAND commitment requires the SEP holder to behave in particular ways.<sup>73</sup>

According to *Unwired Planet*, the *Huawei* requirement of ‘willingness’ to enter into a license refers to an unqualified willingness.<sup>74</sup> Justice Birss stated that *Huawei* requires a willing licensee to show unqualified willingness to take a FRAND license on terms that would constitute as FRAND.<sup>75</sup>

At the offer stage, the *Huawei* guidelines require that the SEP holder should make an offer containing the exact calculation of royalty rate.<sup>76</sup> The decision in *Unwired Planet* case provides that it would not be a case of abuse of dominant position, if the rates offered were not FRAND. The reasons given by the court were threefold. The first reason was that the offers were made in the process of negotiation and as per the court’s observation it is a common market practice to initiate negotiations at a higher rate so that the license can be concluded at a lower rate.<sup>77</sup> The court observed that a very high rate would force the implementer to refuse to negotiate further.<sup>78</sup> This observation was different from what happened in *Huawei* as *Huawei* did not deal with SEP holder providing a non-FRAND rate. The second reason is that offers were not significantly higher than FRAND.<sup>79</sup> The court

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<sup>71</sup>*Pioneer* (n 29), para 87.

<sup>72</sup>*Unwired Planet* (n 14).

<sup>73</sup>*ibid*, para 162.

<sup>74</sup>*ibid*, para 708.

<sup>75</sup>*ibid*, para 708.

<sup>76</sup>*Huawei* (n 2), para 63.

<sup>77</sup>*Unwired Planet* (n 14), para 163.

<sup>78</sup>*ibid*, para 163.

<sup>79</sup>*ibid*, paras 163–164.

provided the third reason that there was no economic evidence and analysis of distortion of competition in the market.<sup>80</sup>

Further, insistence by an implementer on a license that is limited to a single territory will not be FRAND compliant.<sup>81</sup> FRAND is a process and in every case, there is only one set of terms which comply with FRAND. The rates offered by the SEP holders are usually ‘higher’ than the FRAND rate but this approach is not always abusive because there is a legitimate expectation that during the negotiation process the rates may change.<sup>82</sup>

The *Unwired* case has further clarified the meaning associated with FRAND royalty rate and abuse of dominant position. There have been contentious issues about offering license to implementers based on worldwide portfolio.<sup>83</sup> Justice Birss said that asking an implementer to accept a worldwide license would not be considered abusive, as it has efficiency benefits and given the fact that calculation of SEP portfolio values on a country-by-country basis would involve complexities.<sup>84</sup>

## 4 Conclusion

Licensing of SEPs can be foreseen as a major concern in the background of emerging IoT products and services. SEP holders, after the failure of licensing negotiations seek injunctive relief against the implementer. This threat of injunctive relief becomes the basis for an antitrust complaint by the implementers. To invalidate such antitrust concerns, there is an emerging jurisprudence requiring parties to take certain precautions.

The *Huawei* case developed a framework to deal with the general behavior of the parties that ought to be followed in pre-licensing negotiations of SEPs. Further clarifications have emerged from the post-*Huawei* cases in Germany and in the UK. As an obvious outcome of an evolving jurisprudence, courts in different jurisdictions have not been able to fix an objective framework which may be used in latter cases. From the perceived inconsistencies, it seems that the overall conduct of the parties would play a major role before granting injunctive relief to SEP holders. The *Huawei* framework, however, provided enough freedom to maneuver and steer future cases towards a far more objective approach.

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<sup>80</sup>ibid, para 670.

<sup>81</sup>ibid, para 572.

<sup>82</sup>ibid 162.

<sup>83</sup>ibid, para 535.

<sup>84</sup>ibid, para 544.

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# Chapter 8

## The Development and Theoretical Controversy of SEP Licensing Practices in China



Yang Cao

### 1 Introduction

Standards are part of our everyday lives, which enable products to communicate with each other and frequently give rise to substantial consumer benefits. Nowadays tens of thousands of standards are established by Standard Setting Organizations (SSO). About 80% of global merchandise trade is affected by standards and by regulations that embody standards.<sup>1</sup> In terms of the United States (US)-European economic relationship, standards influence an estimated \$200 billion in transatlantic trade.<sup>2</sup> Standards frequently make reference to technologies that are protected by patents. A patent that protects technology essential to a standard is called a standard essential patent (SEP). Nowadays, it is impossible to manufacture standard-compliant products without using technologies covered by one or more SEPs. Licensing from the patent owner of an SEP is a must for those standard-compliant products' manufacturers. The process of licensing of those SEPs has always been a big issue from practical and theoretical perspective. This chapter will elaborate on why licensing of an SEP is particularly challenging, the judicial and practical controversies surrounding SEP licensing, and the possible solution for future SEP licensing in China.

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<sup>1</sup>Raymond G. Kammer, 'The Role of Standards in Today's Society and In The Future' (NIST, 2000) <<https://www.nist.gov/speech-testimony/role-standards-todays-society-and-future>> accessed 14 December 2017.

<sup>2</sup>ibid.

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## 2 Problem with SEP Licensing

All implementers of SEP are required to obtain a license from the patent holders. When a patent is a part of standard, the patent owner has to explicitly permit the use of an SEP on a fair, reasonable, and non-discriminatory (FRAND) basis. This is called a FRAND commitment. Those SEP patent holders are then required to agree that they will make available the SEP to the public on FRAND terms. The effect of agreeing to FRAND is still unknown. From the Chinese Civil law perspective, some courts think that this kind of commitment confer a unilateral obligation on SEP holders.<sup>3</sup> But the truth is FRAND commitment not only confers duty on SEP holders but also constrains the behavior of implementers of SEP. So, the FRAND commitment cannot be only regarded as a unilateral obligation. From a perspective of Chinese Contract Law, some scholars think FRAND commitment as a contract for third party's interest. Under the FRAND commitment, the SEP holder and a standard organization sign a contract and the contract stipulates that the SEP holder has the obligation to license his patents on FRAND basis.<sup>4</sup> Though FRAND can be explained fairly clearly, putting them into practice gets complicated because of so-called lock-in and reverse lock-in effects.

FRAND commitments are designed to prevent the exploitation of unearned market power that patentees may gain from the incorporation of their patents into industry standards. Adoption of a standard thus greatly strengthens the bargaining position of an SEP holder relative to potential licensees and there is a possibility to obtain reasonable royalties from a large body of standard implementers. SEP holders also benefit when their technologies are adopted in a standard because it is generally easier to make compliant products utilizing one's own technology as opposed to those developed by some other party. A SEP holder's bargaining power surges because a prospective licensee has no alternative to licensing the patent and he is at the patentee's mercy.<sup>5</sup> Without a FRAND commitment an SEP holder may engage in patent hold-up (the exploitation of the locked-in position of standard implementers) to obtain supra-competitive royalties that are significantly higher than what the SEP holder could have obtained before its patent was incorporated into the standard.<sup>6</sup> “The purpose of the FRAND requirements ... is to confine the patentee's royalty demand to the value conferred by the patent itself as distinct from the additional value—the lock-in value—conferred by the patent's being designated as standard-essential.”<sup>7</sup> The nature of the FRAND commitment, however, leaves

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<sup>3</sup>*Iwncomm v Sony* (2017) Beijing IP Court: No 1194 of Zhiminzhuzhi.

<sup>4</sup>Liu Ying, ‘Legal Meanings of FRAND commitment’ (2017) 6 Electronic Intellectual Property.

<sup>5</sup>*Apple Corp v Motorola Mobility* (2012) United States District Court, ND Illinois, Eastern Division, 869 F Supp 2d 901.

<sup>6</sup>Joseph Farrell and others, ‘Standard Setting, Patents, And Hold-Up’ (2007) 74 Antitrust Law Journal 603.

<sup>7</sup>*Research In Motion Ltd v Motorola, Inc* (2008) District Court, ND Texas 644 F Supp 2d 788.

room for interpretation and creates the opportunity for SEP holders to renege on their commitments in order to capture the hold-up value of their patents.<sup>8</sup>

In SEP licensing environment, the bad behaviors of SEP holders are always carefully watched, but the implementer is not always innocent. They can reverse hold-up the SEP and get unfair advantage from SEP holders. Whereas alleged ‘patent lock-in’ supposedly results in excessive royalties, ‘patent reverse lock-in’ is undermining licensors attempts even to achieve FRAND terms or to complete any licensing.<sup>9</sup> Normally a seller of a product can restrict practical access to his or her goods without payment just by refusing to sell them, but the holder of an intellectual property right like an SEP holder cannot restrict the implementers’ access to the SEP technology which is freely available in the standards. SEP holder also cannot refuse to license. That is of course why the right to exclude given by the injunction plays such a significant part of intellectual property disputes, because it is the means by which the law seeks to put the intellectual property owner into the analogous position to an owner of tangible property such as a product or land.<sup>10</sup> Thus, if a FRAND commitment prevents a SEP holder from ever seeking an injunction, SEP holders will have no means of pushing infringers to the negotiation table or to avoid licensee’s hold-out. Put differently, standards are published publicly, so that the patented technologies comprising a standard are easy to infringe and the SEP holder has no strong tool to prevent the implementers to explore the SEP in bad faith.

Despite many years of speculation and recently adjusted claims, there is no empirical support for the theory of ‘patent lock-in.’ Various eminent experts refute allegations of systemic ‘patent lock-in.’ It is likely that ‘patent lock-in’ has not occurred in the context of standards and licensing of SEPs because of the FRAND licensing contracts and available recourse to the courts have ensured that licensees cannot be forced to pay ‘excessive’ licensing fees.<sup>11</sup> ‘Reverse Lock-in’, which is also sometimes referred to as ‘reverse hold-up’, rather than ‘patent lock-in’ may instead be a prevalent problem. But the picture seems different in China. Recently, we see growing ‘lock-in’ and ‘reverse lock-in’ practices in China.

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<sup>8</sup>Joe Kattan and Chris Wood, ‘Standard Essential Patents and the Problem of Hold-Up’ (2013) <<https://ssrn.com/abstract=2370113> or <http://dx.doi.org/10.2139/ssrn.2370113>> accessed 12 October 2017.

<sup>9</sup>Anne Layne-Farrar, ‘The Economies of FRAND’ in Daniel Sokol (ed), *Antitrust Intellectual Property and High Tech Handbook* (Cambridge University Press 2016) <<https://ssrn.com/abstract=2725959>> accessed 23 October 2017.

<sup>10</sup>*Unwired Planet v Huawei Technologies* [2017] EWHC 711 (Pat).

<sup>11</sup>Keith Mallinson, ‘Patent Hold-up and Hold-out’ (*IP Finance*, 2016) <<http://www.wiseharbor.com/pdfs/Mallinson%20on%20Holdup%20and%20Holdout%20for%20IP%20Finance%2016%20Aug%202016.pdf>> accessed 13 September 2017.

### 3 SEP Licensing Practice and Regulations in China

#### 3.1 *Guidelines and Judicial Practice Related to SEP Licensing*

To avoid the ‘lock-in’ and ‘reverse lock-in’ in SEP licensing, the Chinese courts at different levels established number of rules and guidelines. It is worth noting that all those rules and guidelines are focused on the negotiation process, few of which mention how to calculate the royalties. Article 24 of the Interpretations (II) of the Supreme People’s Court (SPC) on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases (effective as of April 1, 2016, SPC Interpretation (II)) provides that in an SEP licensing negotiation process, if the SEP holder deliberately avoids its FRAND obligations, causing failure to reach licensing agreement, and the accused infringer has no apparent fault for that failure, the court shall not uphold an injunction claim. That means during the SEP licensing process, both parties have to act in good faith and the injunctive relief is unavailable for an unwilling licensor against a willing licensee. However, the SPC Interpretation (II) does not address the availability of injunction under other circumstances, such as where both parties were negotiating in good faith, or both had fault, or the patent holder was acting in good faith and the implementer was acting in bad faith. Moreover, the SPC Interpretation (II) specifically refers to recommended national and industrial standards, without mentioning compulsory standards or international standards such as LTE and IEEE. According to the clarifications made by the SPC spokesman for publicizing the SPC Interpretation (II), there were controversial issues relating to SEP. Only provisions without dissenting opinions were included in the SPC Interpretation (II), and the remaining issues were left open to be resolved through judicial practices.<sup>12</sup>

On 20 April 2017, the Beijing High Court issued a Guideline for Patent Infringement (2017) (2017 Guideline). Articles 149–153 are SEP-related provisions under the sub-title of Non-infringement Defense. Articles 152–153 specifically set forth how injunctive relief is applicable where neither party is at fault, or both of them are at fault during SEP licensing negotiation. The 2017 Guideline provides that when neither party is at fault, to avoid an injunction, the implementer shall timely deposit an amount of its proposed royalty or provide guarantee to the court. This additional deposit requirement upon potential licensees was a result of intensive advocacy of some influential SEP owners. One of the major concerns of the SEP owners was that if injunctive relief is generally barred without any limitation as long as implementers had no fault in negotiations, it would ultimately harm further FRAND negotiations by increasing the bargaining power of the implementers.<sup>13</sup> Guangdong High Court issued a Working Guideline for the Trial of Standard Essential Patent Dispute Cases

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<sup>12</sup>Yin LI, Hui Zhang and James Yan, ‘New Developments on SEP-Related Disputes in China’ (*Kluwer IP Law*, 2017) <<http://patentblog.kluweriplaw.com/2017/07/03/new-developments-sep-related-disputes-china/>> accessed 24 October 2017.

<sup>13</sup>ibid.

(for trial implementation) on 26 April 2018, which is primarily concerned with SEP disputes in the telecommunications sector. This Guideline established a fault-based test for injunctive relief and specified the particular aspects which should be taken into account when determining FRAND royalty rates.

From the above-mentioned interpretation and guidelines, we can see that Chinese courts are trying to solve the problem of lock-in and reverse lock-in through negotiation process. Generally courts require all parties in the negotiation process to act in good faith to avoid lock-in and reverse lock-in problem. Some kinds of behavior are sure to be deemed as acting in bad faith by the courts. The above interpretations and rules focus too much on the attitudes of the negotiating parties, but they do not solve substantial issues of SEP licensing i.e. the royalties. Except in very few circumstances, most SEP negotiations are centered around the amount of royalties. Because of the lock-in and reverse lock-in problems, it seems everyone is in an advantageous positions to harvest preferential results, and at the same time no one is in a good position to get a good result. So amount of royalties will always be a big issue.

### **3.2 Injunction Issues for Failure of SEP Licensing**

There are lots of controversies surrounding an injunction granted for an SEP. In 2013, in a high-profile antitrust case between *Huawei v InterDigital Corporation* (IDC),<sup>14</sup> the SEP holder IDC was found to have abused its dominant position in the licensing market during its unsuccessful negotiation with the potential licensee, Huawei, and in its subsequent patent infringement actions against Huawei in overseas jurisdictions. The Chinese court held that IDC acted unlawfully when it sought injunctive relief against Huawei, in circumstances where Huawei had expressed its willingness to obtain a FRAND license and had acted in good faith during their license negotiation. On 22 March 2017, the Beijing IP Court handed down a landmark decision for *Iwncomm v Sony* (*Sony* case),<sup>15</sup> concerning an SEP in a designated national standard wireless communication. In this case, the Beijing IP Court set forth its views on the availability of injunction for SEP holders under three circumstances that were not provided by the SPC Interpretation (II). The court stated that an injunction could be granted to prevent a ‘reverse lock-in’ when the SEP holder had no fault and the implementer was acting in bad faith. The court also held that no injunction would be granted if both parties acted in good faith, and in the case where both parties are at fault leading to a failed license negotiation, it would assess and weigh the degree of each party’s fault to determine whether to grant an injunction. The Beijing IP Court found Sony liable for not agreeing to a FRAND license and being an unwilling licensee. The court in this case granted the first FRAND-encumbered injunction in favor of an SEP holder in China. A most

<sup>14</sup>*Huawei v InterDigital* (2013) Guangdong High Court, No 305 of Mingsanzhongzi.

<sup>15</sup>*Watchdata v Hengbao* (2017) Beijing IP Court, No 1194 of Zhiminichuzh.

recent case the court granted injunction for the SEP holder is *Huawei v Samsung (Samsung case)*.<sup>16</sup> This case is about two 4G related SEP owned by Huawei. The court held that Huawei took a very active attitude toward the cross licensing of 4G related SEP owned respectively and Samsung intentionally delayed the negotiation, and Samsung has fault. So, Samsung should stop its infringing activity.

It seems that in *Huawei v IDC* the Chinese courts constrained injunctive relief to narrow circumstances, and warned SEP holders to be very cautious before seeking injunction to avoid raising any competition law issues. Such pro-licensee approach was altered in the *Sony* and *Samsung* case. So from the current practices, no Chinese courts exclude the possibility of granting injunction for SEP licensing situations. It means that the possible users of SEP must first seek a license. An SEP holder's commitment to grant licenses on FRAND terms creates a legitimate expectation that the SEP holder will in fact grant such licenses, a refusal by the SEP holder to grant those licenses may constitute an abuse of dominance.<sup>17</sup> So SEP holders will also have a duty to act in good faith and in a transparent manner. Judge Posner says that an injunction is inappropriate even if a defendant makes no counter-offer at all, given that a FRAND pledge is not conditioned on such behavior.<sup>18</sup> Posner wrote:

By committing to license its patents on FRAND terms, Motorola committed to license the 898 [patent] to anyone willing to pay a FRAND royalty and thus implicitly acknowledged that a royalty is adequate compensation for a license to use that patent. How could it do otherwise? How could it be permitted to enjoin Apple from using an invention that it contends Apple must use if it wants to make a cell phone with UMTS telecommunications capability—without which it would not be a cell phone.<sup>19</sup>

Obviously, almost all SEP disputes center on money issues. Generally an injunction is often conditioned on irreparable harm in China. Many Chinese courts have held that pure monetary damages may not amount to irreparable harm. So, it seems that the injunction granted in *Sony* case is a very unique situation. In the long run, injunction in an SEP situation would be rarely granted. In 2008, the Supreme Court held that currently the Chinese SSOs have not established rules for disclosing and using of patent information in standard, if a patent holder has participated in standard setting process or consented to incorporate his patent into national, industrial or local standards, it means a patent holder has implicitly agreed to license his patents and the third party's exploitation of patent is legal and no violation of patent rights.<sup>20</sup> Now this public disclosure or usage rule is available, but it is not clear if the Supreme Court still hold the same position.

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<sup>16</sup>*Huawei v Samsung* (2016) Shenzhen Intermediate Court, No 816 of Guangdong 03 MINCHU.

<sup>17</sup>Case C-170/13 *Huawei Technologies v ZTE Corp* (2015) Judgement Of The Court (Fifth Chamber) ECLI:EU:C:2015:477.

<sup>18</sup>*Apple v Motorola* (2012) United States District Court For The Northern District Of Illinois Eastern Division, No 1:11-cv-08540.

<sup>19</sup>*ibid.*

<sup>20</sup>(2008) Supreme Court of China, No 4 of Mingsantazi.

### 3.3 Negotiation Process of SEP Licensing

Because of lock-in and reverse lock-in problem in SEP licensing, Chinese courts always require the licensing parties to act in good faith. The Chinese courts have put forward some guidelines on how good faith can be inferred from the negotiation process. But what constitutes good faith is still unclear. Generally if the potential licensee explicitly expresses his willingness to have a bilateral negotiation, the SEP patent holder has the duty to provide patent information or provide specific conditions of license to the potential licensee in written form and in accordance with business and trading practices. The licensor shall give the licensee a time period to respond in accordance with the business practice and the trading custom. The SEP holder cannot obstruct or interrupt the process of negotiation without adequate reasons during the process of negotiation and cannot intentionally propose a clearly unreasonable condition, which results in a failed licensing agreement. According to the opinions in the *Huawei* case, a SEP holder must treat ‘similarly situated’ licensees in a similar manner. Overcharging one party for similar licensing condition is discriminatory.<sup>21</sup> To avoid a reverse lock-in situation, the Chinese courts usually require the potential licensee to diligently respond within a reasonable time clearly stating the acceptability or unacceptability of the terms of the license. A licensee unable to accept specific conditions in a license should propose new conditions in the form of a counter offer. It means that a potential licensee cannot just ignore the licensing offer and he must clearly express whether he is willing to accept the terms of the license. If he refuses the offer, he must provide the licensor with a counter-offer. As a part of the counter-offer he cannot propose an apparently unreasonable condition. Obstructing, delaying or refusing to participate in a license negotiation without adequate reasons is deemed to be a serious issue in a SEP licensing matter.

Surely, the Chinese courts have very clear idea of the ‘lock-in’ and ‘reverse lock-in’ problems in SEP licensing process. Any party refusing to cooperate will be surely punished leading up to the possibility of granting an injunction. From the current practices, if the parties are willing to cooperate and actively participate in the negotiation process, they can be considered to act in good faith. In this regard, the licensing fee is always a key issue in the negotiation process and the court requires both the licensor and licensee to propose reasonable price. In *Samsung* case, the Shenzhen International Court held that Samsung’s offer for 4G relate SEP licensing rate is unreasonable in case that Samsung offered a rate three times higher than Huawei offered when Huawei and Samsung are evenly matched on quality and quantity of 4G SEPs they held. In contrast, Huawei’s offer to Samsung is reasonable considering the 3G and 4G related SEPs’ strength of Huawei, the market price of Samsung 3G and 4G mobile phones and 3G and 4G related SEPs’ aggregate licensing rate. The court held that the SEP licensing rate cannot be too high to surpass the normal profit level in that industry, and must make sure the licensees to

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<sup>21</sup>*Huawei* (n 14).

harvest reasonable operation profits. Currently, no guideline of what constitutes reasonableness is available in China. It is unclear as to what kind of royalty proposal will be regarded unreasonable. Further, it is not clear what standards are to be used to decide royalty rates. It seems, reasonableness means that the licensing parties acting as reasonable person in the same shoes believe that the price they proposed is proper. It is worth noting that reasonableness does not mean that the proposed price has to be same with the late court decided rate, which can be comparably similar. Justice Birss once held that a licensee cannot challenge a license allegedly granted on FRAND terms if it later discovers that a similarly-situated implementer received a lower royalty rate unless the difference would ‘distort competition’ between the two licensees.<sup>22</sup> If both parties act in good faith and propose some reasonable price for the licensing, and still cannot agree on the royalty rate, the court then is required to decide what royalties are proper.

### **3.4 Royalty Issues in SEP Licensing**

What amount of royalty meets FRAND is always a challenging question to answer. It seems that Chinese courts have taken different views on the issue of royalty. In 2008, the Supreme Court held that if a patent is incorporated into national, industrial or local standard, the patent holder can ask the implementers of the patent to pay a certain amount of fees, which should be apparently lower than the normal licensing fee.<sup>23</sup> There is no additional help provided to understand the scope of ‘normal licensing fee’. It seems, it is the licensing fee that the patent holder would get before a patent becomes essential. The question however remains as to why the royalty should be lower than the normal licensing fee? One possible explanation is that because the patent is incorporated into a standard, the patent holder is sure to have more potential users and this will certainly increase the amount of royalties. So, the patent holder can only ask for royalty less than normal licensing fee. The Chinese Supreme Court provides us with a very interesting way to calculate royalty.

In 2016, the Chinese Supreme Court held that the following factors should be considered before deciding the royalty rate: degree of innovation of the patent and its role in the standard, the technical field to which the standard belongs, the nature of the standard, the regional scope of exploitation and the relevant licensing conditions, etc.<sup>24</sup> In *Huawei* case in China, the court used InterDigital’s license with Samsung, Apple, and others as comparable licenses to determine whether the royalty rate InterDigital offered to Huawei was discriminatory. This was also used as a possible reference point to calculate the appropriate FRAND royalty rate that should be charged to Huawei, which was determined to be no more than 0.019%. The question remains when several licensing rates are available for reference, which

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<sup>22</sup>Unwired Planet (n 10).

<sup>23</sup>Supreme Court of China (n 20).

<sup>24</sup>Supreme People’s Court Interpretation (II), art 24.

one shall the court adopt? In the above *Huawei* case, the Chinese courts adopted a so-called possible lowest rate policy.<sup>25</sup> Clearly, Chinese courts rely heavily on comparable license agreements to determine FRAND. The comparable license fees are always important reference points in determining FRAND rate, but the court will adjust the fees in a reasonable manner. The Guangdong High Court in *Huawei* Case held that the following factors should be weighed in while considering the FRAND rate: first, the amount of royalties should take into account the profits derived from the implementation of the patent or similar patent and the proportion of the above profit to the whole profit or sales revenue of the licensee's related products. The technology, capital, licensee's operating labor and other factors together contribute to the final profit of a product. The patent royalty can only be part of the product's profit and not all, and the patentee does not provide all the technology the product needed. So, the patentee only has the right to receive a portion of the profit corresponding to his patent value in product. Second, the contribution made by the patentee is its innovative technology. The patentee can only obtain the additional benefits because of his patent technology not the standard. Third, the amount of royalty shall take into account the patentee's effective patent in the standard. It is unreasonable to require standard implementers to pay royalties for non-SEPs present in the standard. Fourth, royalties should not exceed a certain percentage of product profits, and should be reasonably distributed amongst SEP holders. In the US, the *Georgia-Pacific* case<sup>26</sup> provides the most common framework for deciding damages in patent infringement cases. FTC recommended that courts use the concept of the hypothetical negotiation as the proper framework to determine reasonable royalties and suggested treating the other Georgia-Pacific factors as categories of information that might be relevant in predicting the outcome of the hypothetical negotiation.<sup>27</sup> The judge in that case called for evaluating a 'hypothetical negotiation' between the two parties assuming they were both willing to conclude a license. He also listed a set of 14 other 'factors' that should be accounted for. US courts have relied on the Georgia-Pacific framework for over 40 years and it provided a framework for SEP license assessments.<sup>28</sup> In *Microsoft v*

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<sup>25</sup>According to the evidence of the case, IDC Company signed a license contract with Apple Company for a term of seven years in 2007 and adopted a one-time payment method. The license fee is calculated at a license rate of 0.0187%. IDC Company proposed license rates to Huawei a hundred times higher than Apple (which is about 2%). IDC gives Samsung a royalty rate of about 0.19%.

<sup>26</sup>*Georgia-Pacific Corp v United States Plywood Corp* (1970) United States District Court, S D New York, 318 F Supp 1116.; modified sub nom. *Georgia-Pacific Corporation v U S Plywood* (1971) US Court of Appeals for the Second Circuit, 446 F2d 295.

<sup>27</sup>Federal Trade Commission, 'The Evolving IP Marketplace: Aligning Patent Notice And Remedies With Competition' (FTC, 2011) <<https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf>> accessed 8 June 2017.

<sup>28</sup>Anne Layne-Farrar and Koren W. Wong-Ervin, 'Methodologies for Calculating FRAND Damages: An Economic and Comparative Analysis of the Case Law from China, the European Union, India, and the United States' (2018) 8 Jindal Global Law Review.

*Motorola*, Judge Robart modified the traditional Georgia-Pacific factors to determine a FRAND royalty rate.<sup>29</sup> Several federal district courts in US have weighed in on a framework for determining a reasonable royalty for FRAND-encumbered SEPs. These courts have employed various methodologies, including using a modified version of the Georgia-Pacific factors that accounts for the value of the SEPs that contribute to the standard, the importance of that standard to the infringing products, and the aggregate royalty demands for firms implementing a complex standard with many essential patented technologies, typically known as the ‘royalty-stack’.<sup>30</sup> In *Unwired Planet v Huawei*, Justice Colin Birss offers two possible methods of calculating the FRAND royalty: one based on an analysis of comparable license rates, and the other based on a top-down analysis of the total aggregate royalty that should be attributable to the standards and SEPs at issue. In addition to disregarding the US Georgia-Pacific framework, which clearly has no place in a UK decision, Justice Birss rejects another touchstone of US FRAND analysis. The notion that a FRAND royalty should reflect the *ex-ante* value of the patented technology without considering any value attributable to the adoption of the technology in a standard.<sup>31</sup> Without the baggage of Georgia-Pacific to clutter the analytical exercise, Justice Birss focussed on the actual task at hand: computing the value of the patented technology as compared to the standard and product at issue.

In sum, the following methods are used in deciding royalty rate worldwide:

## 1. Comparable Method

This approach, seen in rulings from China, the UK, and the US thus far focuses on just two of the Georgia-Pacific factors: factors 1 and 2 on comparable licenses. This method attempts to assess the value of asserted SEPs in isolation using comparable license agreements and other methodologies but without significant reference to other patents covering the same standard.<sup>32</sup>

## 2. Top-Down Methodology

Under the top-down method, the FRAND royalty equals  $T \times S$ . T is the total aggregate SEP royalty burden of a particular standard on a product, and S is the share of that aggregate royalty that is allocable to the SEP holder. The top-down approach involves firstly to determine the aggregate royalty that should be paid for

<sup>29</sup>*Microsoft v Motorola* (2012) United States Court of Appeals for the Ninth Circuit, 696 F3d 872.

<sup>30</sup>Edith Ramirez, ‘Standard Essential Patents and Licensing: An Antitrust Enforcement Perspective’ (FTC, 2014) <[https://www.ftc.gov/system/files/documents/public\\_statements/582451/140915\\_georgetownlaw.pdf](https://www.ftc.gov/system/files/documents/public_statements/582451/140915_georgetownlaw.pdf)> accessed 26 July 2017.

<sup>31</sup>Jorge Contreras, ‘*Unwired Planet v Huawei*: An English Perspective on FRAND Royalties’ (*Patently-O*, 2017) <<https://patentlyo.com/patent/2017/04/unwired-perspective-royalties.html>> accessed 23 October 2017.

<sup>32</sup>Jorge Contreras: TCL V. Ericsson: The First Major US Top-Down FRAND Royalty Decision’ (*Patently-O*, 2017) <[https://patentlyo.com/patent/2017/12/contreras-ericsson-decision.html?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+PatentlyO+%28Dennis+Crouch%27s+Patently-O%29](https://patentlyo.com/patent/2017/12/contreras-ericsson-decision.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+PatentlyO+%28Dennis+Crouch%27s+Patently-O%29)> accessed 29 December 2017.

all SEPs covering a particular standard, and then to allocate an appropriate portion of the total to the asserted SEPs.<sup>33</sup>

### 3. Hypothetical Negotiations

The purpose of conducting hypothetical negotiation is to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began. The court must try to recreate the *ex-ante* licensing negotiation scenario and describe the resulting agreement.<sup>34</sup> When using this method, a few differences have to be noticed.

Whether a FRAND royalty should reflect the *ex-ante* value of the patented technology? Justice Birss rejected the notion that a FRAND royalty should reflect the *ex-ante* value of the patented technology, without considering any value attributable to the adoption of the technology in a standard. Judge Robart in the *Motorola* case held that the exercise must reconstruct the negotiation that would have taken place between the parties prior to the date on which the patented invention was adopted as a part of the industry standard.

The courts in US apply a modified version of the Georgia-Pacific factors to address the unique circumstances of SEP licensing to recreate a hypothetical negotiation between the parties as the best starting point for FRAND assessments. The Chinese courts on the other hand seems to be adopting a more narrow factor to determine royalty rate.

A FRAND license must be non-discriminatory. This means that the licensor must not discriminate against similarly-situated licensees. So comparable method is an important method in determining royalty rate. Comparable method however will only provide a base for calculating royalty rate. The prohibition on discrimination would mean very little if the largest, most profitable firms could always be a category unto themselves simply because they were the largest and most profitable firm.<sup>35</sup> Generally, comparable method is always a good method for determining non-discrimination. The comparable method usually provides an appropriate base for valuing royalty rate, but what rate is fair and reasonable must be decided by other way. The Chinese courts clearly use the Top-Down Methodology and Hypothetical negotiations simultaneously. The Guangdong High Court clearly points out that the royalty rate should be decided on technology per se and should not harvest supra-competitive profits because of it being incorporated into a standard. It surely borrows some ideas from Hypothetical Negotiations method. To decide the specific amount of royalty rate, the court also uses the top-down methodology in considering the contribution that the SEP made to the profits and allocating an appropriate portion

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<sup>33</sup>ibid.

<sup>34</sup>In re Innovatio IP Ventures, LLC Patent Litigation (2013) United States District Court, N.D. Illinois, Eastern Division, MDL Docket No. 2303 Case No. 11 C 9308.

<sup>35</sup>TCL Communications v Ericsson (2017) United States District Court Central District Of California, Case No: SACV 14-341 JVS (DFMx) and CV 15-2370 JVS (DFMx).

of the total to the asserted SEPs.<sup>36</sup> The Chinese courts seem to take a more flexible method in justifying its royalty decision. But we did not see what specific method the court had adopted in calculating specific royalty rate.

Some scholars think that a court should not adjudicate the pure FRAND royalties dispute.<sup>37</sup> The freedom of contract is essential to good and sound operation of market economy. If the parties cannot reach to an agreement on specific price of royalty, a court-determined FRAND rate is a breach of freedom of contract and sometimes it is rather difficult for the court to ascertain because of the complex royalty licensing calculation. But the courts are surely not agreeing with these holdings and believed that they have the legal obligations to adjudicate any dispute arising from SEP licensing issues.

## 4 Solution to SEP Licensing Lock-in Problems

It is difficult to ascertain the exact royalty rate in a given situation. Rather than the court the licensing parties would know the optimal rate. All those methods adopted by different courts are causing controversy and do have certain shortcomings. The use of comparable licenses has been criticized on the basis that most licenses are not really comparable to the desired FRAND license.<sup>38</sup> This method does not reflect the diversity and evolving dynamics of SEP markets. So what is the possible solution to this impossible mission? Empirical study shows that in a SEP licensing situation the patent holders are always actively participating in the negotiation process and have strong desire to reach an agreement because most courts are somewhat hostile to SEP holders and never grant excessive damages even in cases of infringement.<sup>39</sup> So from practical point of view, the ‘reverse lock-in’ problem should be the focus of regulations. In that situation the SEP users intentionally ignore their duty of negotiation and are unwilling to pay the royalty rate on FRAND basis. In fact, the SEP holders have very limited options to push the SEP users to the negotiation table and force them to pay the licensing fees. One of the powerful tools the SEP holders have is injunction. In China, most courts are unwilling to grant injunction for the unlicensed use of SEP. Until now only two cases (*Iwncomm v Sony and Huawei v Samsung*) have granted injunction for the unlicensed uses. Hopefully, more injunctions will be granted in SEP licensing situation to push SEP users to the negotiation table. In *Samsung* case, the Shenzhen Intermediate Court held that the injunction relief in SEP case should differ from Non-SEP case. The court states that

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<sup>36</sup>Huawei (n 14).

<sup>37</sup>Ma Haisheng, ‘The Impossibility of Judicial Determination of Royalty Rate’ *Intellectual Property Magazine* (2016) 12.

<sup>38</sup>Jonathan S. Masur, ‘The Use And Misuse Of Patent Licenses’ (2015) 110 Northwestern University Law Review 115.

<sup>39</sup>Alexander Galetovic, Stephen Haber and Ross Levine, ‘An Empirical Examination Of Patent Hold-Up’ (2015) 11 Journal of Competition Law & Economic 549.

because of the nature of these cases involve 4G SEPs, the parties may continue to negotiate after the decisions become effective. If the parties reach an agreement and request the court not to execute the court order, such request should be granted.

Generally, the licensing royalties should be negotiated on the basis that is mutually beneficial to the SEP holder and the licensee. If the patented technology allows the licensee to drastically reduce costs or increase sales over competing technologies, the licensee should be willing to pay more.<sup>40</sup> Surely the SEP holders are also willing to license their patents and the potential licensors have to use the SEP, so both parties have strong desire to reach a mutually beneficial agreement. The licensing contract is sure to leave both the parties in a better position if agreed on voluntary base. So, the courts should constrain from determining the royalty rate. The current regulation should focus on how the participants act in the negotiation process. The Chinese Contract Law clearly specifies that all participants must act in good faith. The breach of good faith duty is liable for *culpa in contrahendo*. Besides, the existing rules in contract law are highly recommended for a relevant authority to establish national rules for SEP licensing negotiation. There are no national rules for negotiation process and some rules are scattered at different places. The national rule shall infuse more clarity and flexibility by highlighting the bilateral negotiation as the principal forum for determining FRAND.

The courts shall decide a specific royalty rate only if both participants failed to reach an agreement even after acting in good faith. Due to difficulty in rates determination, the author thinks it may be best for the court to emphasize on the FRAND range instead of rates. The courts can narrow rates to a certain range between willing-to-pay and willing to accept and push the participants to have further negotiation on that base. The courts may point out to some rules that the negotiators must follow such as: good faith, no discrimination against similarly situated licensees<sup>41</sup> the way of determining the aggregate SEP royalty applicable to a standard, and the proportion of profits allocable to the asserted SEPs. In the process of narrowing the rates in the scope of bargaining range, the courts would have taken into account interests of both parties.

## 5 Conclusion

SEP royalty rate will always be a big topic in technology licensing field. ‘Lock-in’ and ‘Reverse Lock-in’ are obstacles both parties have to overcome. Both parties have strong desires to conclude an agreement concerning SEP licensing. What kind of measures should be taken to push the licensing parties to negotiation table and

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<sup>40</sup>Ramirez (n 30).

<sup>41</sup>*TCL Communication* (n 35); The court held that low-end vendors would be compared with high-end vendors like as to FRAND rates, giving low-end vendors the benefit of favorable rate packages that high-end vendors have been able to negotiate with respect to far more expensive products.

expedite the SEP negotiation process should be key concerns in SEP licensing situations. What the Chinese courts did currently is to confer a duty of good faith on both parties. But a good faith duty is still not enough to bring a good result. Deadlock sometimes seems inevitable even when both parties have no bad faith. So, the future job should be focused on solving that deadlock. The court always has no such capacity to decide the specific amount of royalty. When both parties exhaust efforts to arrive at a royalty rate on FRAND terms but are not successful, then it is better to allow independent experts or organizations to decide the royalty rate.

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# Chapter 9

## Regulating Abuse of SEPs in Mobile Communications Market: Reviewing 1st and 2nd Qualcomm Cases in Korea



Dae-Sik Hong

### 1 Introduction

The purpose of this chapter is to analyze the 1st and 2nd Qualcomm cases of the Korea Fair Trade Commission (KFTC) from a legal perspective. A core element of Qualcomm's business model lies in its licensing policies. Qualcomm is a vertically integrated enterprise that engages both in patent licensing and modem chipset businesses. It is divided into the patent licensing division (QTL) and the chipset division (QCT). The KFTC rendered a resolution on the 1st Qualcomm case on July 2009. In this case, the KFTC only reviewed discriminatory factors or conditional rebate factors included in the method of calculating royalty without touching on Qualcomm's business model. With the court proceedings relating to the 1st case still pending, the KFTC initiated another investigation into Qualcomm and sanctioned Qualcomm again in December 2016, which is the 2nd Qualcomm case. In this case, the intrinsic actions that constitute Qualcomm's business model were concerned such as the refusal or restrictions of standard essential patents (SEPs) licenses, the linkage of chipset supply with patent license, and the imposition of unfair and unreasonable licensing terms with the handset manufacturers.<sup>1</sup>

This chapter examines and analyzes some of the competition law issues raised in the two cases. The review consists of the following four parts: the issue of defining relevant markets, the criteria for determining whether there is a violation or evasion

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<sup>1</sup>Joint Comments of the American Bar Association Sections of Antitrust Law, Intellectual Property Law, International Law, and Science And Technology Law on Revisions to the Korea Fair Trade Commission's Review Guidelines on Unfair Exercise of Intellectual Property Rights' (American Bar Association, October 2015) <[https://www.americanbar.org/content/dam/aba/administrative/antitrust\\_law/at\\_comments\\_20151030\\_ip\\_guidelines.authcheckdam.pdf](https://www.americanbar.org/content/dam/aba/administrative/antitrust_law/at_comments_20151030_ip_guidelines.authcheckdam.pdf)>.

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of fair, reasonable, and non-discriminatory (FRAND) commitment, the competition law assessment of FRAND commitment infringements, and the theories and establishment of competitive harm. The chapter ends with the comparison with other jurisdictions.

## 2 Overview of the 1st and 2nd Qualcomm Cases

### 2.1 *Overview of Qualcomm*

Qualcomm consists of three companies that operates two main businesses. The three companies are Qualcomm Incorporated (QI), a US-based patent licensing business operator, Qualcomm Technologies (QTI), a 100% subsidiary of QI, operating a modem chipset business, and CDMA Technologies Asia-Pacific PTE Limited (QCTAP) that sells a modem chipset as a wholly owned subsidiary of QI. The two main businesses are patent licensing business and modem chipset business. The patent licensing business is a business that collects royalties from licensees while maintaining SEPs in the mobile communications industry. Modem chipset business is a business that manufactures and sells modem chipsets using SEPs.

Given the finding of the facts in the KFTC decision, Qualcomm's business model is characterized as integration of two main businesses. One of the key finding is that Qualcomm is a vertically integrated enterprise that engage both in patent licensing and modem chipset businesses. Another key finding is about Qualcomm's licensing policies according to which Qualcomm refuses or restricts to license SEPs to rival chipset makers while it licenses only to cellphone manufacturers. Some call this practice 'level discrimination' between component level and device level.<sup>2</sup>

Qualcomm was accused of using this business model as a leveraging tool in competition and negotiations. Qualcomm manufactures modem chipsets using an internal patent license, but competitors should manufacture such chipsets without a patent license. As a result, Qualcomm has a competitive advantage over its competitors. Cellphone manufacturers using competitors' modem chipsets are vulnerable to Qualcomm's threat of patent infringement. In addition, Qualcomm will have increased bargaining power with cellphone manufacturers, allowing it to sell their modem chipsets or license SEPs to cellphone manufacturers on favorable terms.

### 2.2 *Summary of the 1st Qualcomm Case*

The KFTC's 1st Qualcomm case investigation was launched in February 2006. In April 2006, on-site investigation was conducted on Qualcomm Korea and domestic

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<sup>2</sup>Sang-Seung Yi, 'Responsibilities of FRAND- Encumbered SEP Owners under Competition Law' (AsLEA 12th Annual Conference, Seoul, June 2016).

handset manufacturers. In April and June 2006, the KFTC received complaints against Qualcomm from two domestic companies and two foreign companies<sup>3</sup> for alleged violations of the Monopoly Regulation and Fair Trade Act (MRFTA) of Korea and sent an examination report<sup>4</sup> to Qualcomm in February 2009. The KFTC's full commission held six deliberation meetings from May 2009 to July 2009. On 23 July 2009, Qualcomm was imposed with a fine of 273.1 billion won (approximately 218 million US dollars) with corrective measures. The written decision on this case was completed on 30 December 2009.<sup>5</sup>

The Seoul High Court, which has exclusive jurisdiction in the first instance, heard an appeal filed by Qualcomm, and rendered a ruling on 19 June 2013.<sup>6</sup> As a result of the ruling, most of Qualcomm's claims were dismissed except to cancel a little part of the corrective actions. The case is currently pending in the Korean Supreme Court.

### ***2.3 Summary of the 2nd Qualcomm Case***

While 1st case is still pending in the Korean Supreme Court, the KFTC initiated another investigation into Qualcomm. This time the major opponent was a domestic company, Samsung. The KFTC's 2nd Qualcomm case investigation was launched in August 2014, and on-site investigation of Qualcomm Korea was conducted in March 2015. The KFTC sent an examination report to Qualcomm in November 2015. Qualcomm submitted a written opinion in May 2016, and the KFTC held four deliberation meetings from June to October 2016. The KFTC was concerned as being seen favorable to the domestic company at first. However, as the case progressed, foreign companies such as US-based Intel, Apple, NVidia, Taiwan-based MediaTek, and China-based Huawei cooperated with the KFTC, which helped the KFTC feel comfortable. Qualcomm filed a motion for consent decree in November 2016, which was dismissed from the KFTC in December 2016. The KFTC imposed a fine of 1.03 trillion won (approximately 850 million US dollars) with corrective measures on 21 December 2016. The written decision on this case was completed on 20 January 2017.<sup>7</sup>

In February 2017, Qualcomm filed an appeal lawsuit and application for suspension of enforcement with the Seoul High Court against the decision. The Seoul High Court dismissed the application for suspension on 4 September 2017. The appeal lawsuit is currently ongoing at the Seoul High Court.

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<sup>3</sup>Those are Qualcomm's rival US modem chipset companies like Broadcom and Texas Instrument which had interest in entering the modem chipset market.

<sup>4</sup>The report corresponds to a Statement of Objections in the European Union (EU).

<sup>5</sup>KFTC Decision, No. 2009-281, 2009Jisik0329 (S. Kor.).

<sup>6</sup>Seoul High Court 2010 Nu3932, Order dated 19 June 2013 (S. Kor.).

<sup>7</sup>KFTC Decision, No. 2017-025, 2015Sigam2118 (S. Kor.).

## 2.4 *Background of the Cases*

The 1st and 2nd Korean Qualcomm cases have been set at different stages of mobile communications standard technology developments. Mobile communications standard technologies have been developed from the 1st generation through the 2nd and the 3rd generation to the 4th generation. With regard to the 2nd generation, South Korea was deeply associated with and highly dependent on Qualcomm's technologies. At the time of the first adoption of CDMA technology in Korea, Qualcomm was a small company. But it grew significantly in the market as Korea's market expanded.

In 2009, when the 1st Qualcomm case decision was made, services based on the CDMA standard, the 2nd generation mobile communications technology, and services based on the CDMA2000 and WCDMA standard, the 3rd generation mobile communications technology coexisted. Qualcomm has been a leader in CDMA technology since its foundation in 1985. Korea selected the CDMA system as the 2nd generation mobile communications system in 1993. SK Telecom, Korea's number 1 mobile communications provider, succeeded in commercialization of the world's first CDMA based mobile communications service in 1996. The Telecommunications for Technology Association (TTA) in Korea established CDMA mobile communications standards based on seven patents held by Qualcomm in 1996. Qualcomm has 90% of SEPs in CDMA technology.

Korea's mobile operators are actively involved in the introduction of 3rd generation mobile communications services. In December 2000, three operators, SK Telecom, KTF and LG Telecom participated in the service provision project using the IMT-2000 standard based on CDMA2000. SK Telecom and KTF have begun to provide 3rd generation mobile communications services based on WCDMA standard. Qualcomm accounts for 27% of SEPs in WCDMA technology. However, at the time of 2009, 3rd generation mobile communications services were not yet active, and Qualcomm's SEPs accounted for a significant portion of the CDMA standard used in 2nd generation mobile communications services, which still had high utilization rates. In this context, the 1st Qualcomm case focused on Qualcomm's patents included in the CDMA standard as the relevant technology market, and the relevant component market was limited to domestic CDMA modem chipset market and domestic CDMA RF chip market.

The 2nd Qualcomm case decision was made in 2016, when mobile services were transitioning from 3rd generation mobile communications based on WCDMA standard to 4th generation mobile communications based on the LTE standard. The development of the 4th generation mobile communications technology originated from the WiMax standard developed by the Institute of Electrical and Electronics Engineers (IEEE) since 2004, which influenced the 3rd Generation Partnership Project (3GPP) to establish the LTE standard in 2008. In Korea, LTE service started in July 2011. Qualcomm has 16% of the SEPs included in the LTE standard.

The proportion of Qualcomm's patents in mobile telecommunications standards has been gradually decreasing from 2nd generation to 3rd generation, and the proportion of modem chipsets in handsets is decreasing as handsets evolve into smartphones. Nonetheless, there was growing dissatisfaction with the chipset makers and handset makers as Qualcomm continued to maintain its superiority in patent licensing negotiations while achieving high royalty revenues. Under this circumstance, in the 2nd Qualcomm case, Qualcomm's mobile SEP license markets for CDMA, WCDMA and LTE standards were examined as a relevant technology market respectively, and the modem chipset markets for CDMA, WCDMA and LTE standards were considered as a relevant component market, correspondingly.

### 3 Conduct Types in Question

#### 3.1 *Conduct in 1st Case*

In the 1st Qualcomm case, there were two types of conduct related to licensing for handset manufacturers and one type of conduct related to selling handset components. The types of behaviors related to licensing for handset manufacturers are (1) discrimination on collecting royalties for licenses, (2) conditional rebates on modem chipsets and RF chips, and the type of behavior associated with selling handset components and (3) imposition of royalties even after expiration of patents.

##### 3.1.1 Discrimination in Collecting Royalties

The KFTC concerned three types of acts for discrimination. This is due to: (i) discrimination against domestic-model handset using non-Qualcomm chipsets by price-netting program; (ii) discrimination against export-model handset using non-Qualcomm chipsets by royalty rate discount program; and (iii) discrimination against non-Qualcomm chipset users by royalty cap program.<sup>8</sup> The KFTC acknowledged that these practices produced discriminatory effects between Qualcomm's modem chipsets and its competitors' modem chipsets to handset makers even if it is the same handset maker by making them pay higher royalties when using modem chipsets other than Qualcomm's.

This conduct type is related to the non-discriminatory element of FRAND. In order to determine whether the conduct in question constitutes an act of

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<sup>8</sup>Shiwon Ryu, 'Regulation of Anticompetitive IP Licensing Practices Studied in Qualcomm Case' (2011) 9 Korea University Law Review 81 <[http://koreauniversitylawreview.korea.ac.kr/xe/?module=file&act=procFileDownload&file\\_srl=997&sid=731549d1e80c4c3ce235d9d83d4cf712&module\\_srl=115](http://koreauniversitylawreview.korea.ac.kr/xe/?module=file&act=procFileDownload&file_srl=997&sid=731549d1e80c4c3ce235d9d83d4cf712&module_srl=115)>.

discrimination in price or trading conditions under the MRFTA, a separate analysis is required to determine the ‘discriminatory’ conduct element. The KFTC’s Guidelines for Review of Abuse of Market Dominant Position (Abuse Guidelines) does not include any standards by which to judge the behavioral element of discrimination. However, the KFTC referred to the standards specified in the Guidelines on Review of Unfair Trade Practice (UTP Guidelines) in reaching a decision even though the analysis of unfair trade practices may be less rigorous than that of abuse of dominance.<sup>9</sup>

### **3.1.2 Conditional Rebates on Modem Chipsets and RF Chips**

In this case, the problematic rebate payment method is a retrospective, progressive payment imposed on handset manufacturers on the condition that Qualcomm chipsets are purchased at a certain rate or on a certain scale. The KFTC acknowledged that this act caused cumulative exclusionary effects along with royalty discrimination on competitors that manufacture modem chipsets and RF chipsets.

### **3.1.3 Imposition of Royalties Even After Expiration of Patents**

Qualcomm set up and maintained a provision that imposed royalties as much as 50% of the applicable royalty rate for invalid or expired patents. The KFTC acknowledged that it would lead to a disadvantageous effect on the counterparts by increasing the risk of being taken unfair gains when implemented.

## **3.2 *Conduct in 2nd Case***

In the 2nd Qualcomm case, there was one type of behavior related to the conditions under which licensing to the rival modem chipset manufacturers is allowed, and two types of behavior related to the conditions under which the licenses for the handset manufacturers are given. The conduct type related to the licensing of rival modem chipset manufacturers is (1) an act of refusing or restricting to license SEPs to rival chipset makers, and the types of conduct related to the licenses for the handset manufacturers are (2) an act of linking chipset supply with patent license with handset makers and (3) an act of imposing unfair and unreasonable licensing terms with handset makers.

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<sup>9</sup>Mark Furse, *Antitrust Law in China, Korea and Vietnam* (Oxford University Press 2009) 259.

### 3.2.1 Refusing or Restricting to License SEPs to Rival Chipset Makers

Before 2008, while licensing to both rival modem chipset makers and handset manufacturers, Qualcomm has not closed the possibility of licensing to rival chipset makers but restricted the scope of the license to them by imposing post-sale restriction on the right to use chipset, allowing to sell only to handset makers having license agreement with Qualcomm. It can be explained as multi-level licensing<sup>10</sup> strategy in order to prevent the application of the patent exhaustion principle.<sup>11</sup> However, after 2008, it refuses to license rivals and only offers agreements not to file lawsuits or to reserve lawsuits (covenant not to sue, covenant to exhaust or stand still). The change in policy in 2008 seems to be a response to the uncertainty in the applicability of patent exhaustion principle caused by the decision in *Quanta* case by the Supreme Court of the US in 2008.<sup>12</sup>

### 3.2.2 Linking Chipset Supply with Patent License with Handset Makers

Qualcomm licenses SEPs to licensees only when it supplies its modem chipsets to them, refusing to supply chipsets when licensees do not enter into the patent license agreement. This can be summarized as a policy that there are no chips without a prior license which is also called ‘no license, no chips’ policy.<sup>13</sup> The KFTC acknowledged that Qualcomm actually used the threat of terminating the supply of

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<sup>10</sup>Multi-level licensing refers to a practice that a patentee offers to license to a chipset maker or component maker on condition that it sells only to end-user equipment makers who have themselves paid for a license. Karl D. Belgum, ‘The Next Battle Over FRAND: The Definition of FRAND Terms and Multi-Level Licensing’ (2014) Berkeley Law <[https://www.law.berkeley.edu/files/Belgium\\_Karl\\_IPSC\\_paper\\_2014.pdf](https://www.law.berkeley.edu/files/Belgium_Karl_IPSC_paper_2014.pdf)>.

<sup>11</sup>Roberto Grasso, ‘Selected Issues In SEP Licensing In Europe: The Antitrust Perspective’ in Ashish Bharadwaj, Vishwas H. Devaiah and Indranath Gupta (eds) *Complications and Quandaries in the ICT Sector* (Springer Singapore 2017) 86 <<https://www.springer.com/in/book/9789811060106>> (stating that the strategic refusal to license at component level is based on the patent exhaustion doctrine); Under patent exhaustion principle, one who purchases from a patentee or licensee in an authorized sale obtains the patented product free and clear of patent rights; *Quanta Computer, Inc. v LG Electronics, Inc.* (2008) Supreme Court of the United States, 553 US 617.

<sup>12</sup>In *Quanta*, the court held that ‘[t]he longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item’. But it remains unclear as to what extent a patentee can use a conditional license to impose restrictions on downstream purchasers; Richard Stern, ‘*Quanta Computer Inc v LGE Electronics Inc*: Comments on the Reaffirmance of the Exhaustion Doctrine in the United States’ (2008) European Intellectual Property Review 527.

<sup>13</sup>Greg Sivinski, ‘District Court Denies Motion to Dismiss FTC Section 5 Complaint Against Qualcomm’ (*Competition Policy International*, 2017) <<https://www.competitionpolicyinternational.com/wp-content/uploads/2017/08/North-America-Column-August-Full-4.pdf>>.

modem chipsets as negotiation leverage in the process of license negotiations with handset companies.<sup>14</sup>

### **3.2.3 Imposing Unfair and Unreasonable Licensing Terms**

Roughly speaking, unfairness element refers to transparency and good faith in the negotiation process and unreasonableness element refers to balancing mechanism with conflicting interests. The unfairness or unreasonableness of arrangements made with handset makers has been examined in three aspects. The first aspect is that Qualcomm does not present the list of patents when licensing and providing portfolio licenses including SEPs and other non-SEPs (comprehensive portfolio license). The second aspect is that it does not provide good faith negotiation procedures and imposes unilaterally-decided licensing terms in which royalties are based on the entire handset sales prices (unilateral licensing terms). The third aspect is that handset makers are required to license their patents to Qualcomm's customers without fair compensation (royalty-free cross-grant terms).

## **3.3 Relationship Between Conduct Types of Two Qualcomm Cases**

Of the types of conduct covered in the 2nd Qualcomm case, there are issues not covered in the 1st Qualcomm case because the 2nd case reflects changed situations. However, some issues from the conducts of the 2nd case arise from the continuing situation in the 1st case and have close relationship with the conduct types of the 1st case.

The 2nd case conduct type of refusing or restricting to license SEPs to rival chipset makers has been strengthened since 2008 resulting from change in licensing policy from ‘component-level and device-level parallel policy’ (multi-level licensing) to ‘device-level only policy’ (level discrimination), which was not reviewed in the 1st case. Practice of linking chipset supply with patent license with handset makers in the 2nd case started from 1993, but was not dealt with in the 1st case.

Qualcomm’s practice of calculating royalties based on the entire handset sales prices (entire market value rule) existed in both the 1st and 2nd cases. In relation to this practice, royalty calculation formula and its adoption process were reviewed in the 2nd case, while only discriminatory factors or conditional rebate factors included in the method of calculating royalty were reviewed in the 1st case.

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<sup>14</sup>Korea Fair Trade Commission (KFTC), ‘Strict Sanctions on Qualcomm’s Abuse of Cellular SEPs’ (2016) <<https://www.qualcomm.com/documents/kftc-issuedpress-release-dated-december-28-2016-unofficial-english-translation>>.

The KFTC rested its findings on the provision prohibiting ‘unfair interference with another’s business activities’ under Article 3-2(1) (Abuse of Market Dominance) of MRFTA and Article 5(3) of the Enforcement Decree. In some conduct types, ‘abuse of superior trading position’ under Article 23(1) (Unfair Trade Practices) of the MRFTA and Article 36(1) of the Enforcement Decree was also applied.

### ***3.4 Expected Effects on Qualcomm’s Business Model***

In the 1st case, Qualcomm’s business model was not influenced, only methods of operation being affected. The remedies of the 1st case could not address problems of entry barrier for potential entrants into modem chipset markets effectively, which brought about additional complaints from the competitors despite the outcome of the 1st case.

In contrast, the remedies of the 2nd case impact directly on Qualcomm’s business model. To comply with the remedies requiring Qualcomm to engage in good faith negotiation with rival model chipset makers and handset makers, Qualcomm should change its licensing policy fundamentally. The required policy change may affect the methods to calculate royalty fees which are the key for Qualcomm to earn a lot of profits despite decreasing influence of Qualcomm in the LTE standard.

## **4 Some Competition Law Issues**

### ***4.1 Issue of Defining Relevant Markets***

A common feature of the 1st and 2nd cases related to the relevant market definition is distinction between technology market and goods market. Main goal of market definition is to understand the competitive constraints systemically and thus the degree of market power.<sup>15</sup> As Qualcomm is a vertically integrating enterprise active in both technology and goods markets, the market definition is required to make distinction between two markets.

Two issues have been raised regarding Qualcomm’s SEPs license markets. One issue is whether to define a separate market for each mobile telecommunications technology standard. Another issue is whether to consider a number of Qualcomm’s SEPs included in one technical standard as the same relevant market. The KFTC decided that different communications standards would make different markets based on the fact that CDMA, WCDMA and LTE standards cannot be replaced

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<sup>15</sup>David Evans, ‘Lightening Up on Market Definition’ in Einer Elhauge (eds), *Research Handbook on the Economics of Antitrust Law* (Edward Elgar 2010).

with one another. In addition, the KFTC determined that Qualcomm's SEPs should constitute a cluster market, not a discrete market within the standard. That's because each of Qualcomm's technology included in the same standard has a relationship of technical and transactional complements with one another.

Regarding the delineation of the relevant geographical market, there is a question of whether the geographical area is domestic or international. While the geographical area was domestic in the 1st case where only CDMA standard was reviewed, it was the international market in the 2nd case where all of the CDMA, WCDMA, and LTE standards were reviewed. What makes the difference is that the CDMA standard could not be replaced outside the domestic market, but the WCDMA or LTE Standards have been internationally recognized with few substitutes.

## **4.2 Determining Whether FRAND Commitment Is Violated or Evaded**

A FRAND commitment is made when the patent owner commits to the standard setting organization (SSO) that it will negotiate on FRAND terms for licensing of patented technology prior to the selection of the patented technologies for inclusion in the standard. A FRAND-encumbered SEP holder is under a pre-contractual obligation to negotiate the license in good faith, not under a contractual duty to grant a FRAND license to any potential licensee.<sup>16</sup>

Generally speaking, the specific meaning of FRAND can only be established in concrete situations, in particular taking into account the positions of the licensor and the licensee.<sup>17</sup> The elements that make up the FRAND terms can be divided into fairness and unreasonableness elements and non-discriminatory element. The non-discriminatory element of FRAND was reviewed in the 1st case, while the fairness and unreasonableness elements of FRAND were reviewed in the 2nd case.

With regard to whether Qualcomm's conduct in the 1st case violated non-discriminatory element of FRAND, the KFTC regarded its finding of discrimination as a violation of FRAND commitment. It appears not to have precisely interpreted the boundary of Qualcomm's FRAND obligation, nor it did provide clear guidance as to how Qualcomm's royalty scheme was a FRAND violation.<sup>18</sup> The separate issue is whether setting a different price to even a single firm pursuant

<sup>16</sup>Dae-Sik Hong, 'A Review of Korean Competition Law and Guidelines for Exercise of Standard-related Patents' (2015) *The Journal of Korean Law* 127.

<sup>17</sup>Damien Geradin and Miguel Rato, 'Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND' (2007) *European Competition Journal* 101.

<sup>18</sup>Yoonhee Kim and Hui-Jin Yang, 'A Brief Overview of Qualcomm v Korea Fair Trade Commission' (2015) 1 *Competition Policy International Antitrust Chronicle* <<https://www.competitionpolicyinternational.com/file/view/7352>>.

to specific conditions may count as discrimination. Both the KFTC and the Seoul High Court decided in the affirmative, but based on different reasons.<sup>19</sup>

The issue that Qualcomm's conduct in the 2nd case violated fairness and unreasonableness elements was illuminated in three respects. The first is normality of licensing method. The KFTC acknowledged the fact that the market-dominant vertically integrated operator in both technology markets (especially SEPs) and goods market refuses to license modem chipset makers only licensing to handset makers does not correspond to normal trading practices.

The second is fairness in negotiation and set-up or modification of prices or other trading conditions. This is a review of Qualcomm's compliance with the FRAND commitment from the perspective of the trading process. The KFTC considered that the practice of linking modem chipset supplies with licensing agreements is against a duty of complying with good faith negotiation process.

The third is the reasonableness of prices or other trading conditions. This is to assess the rationality of the trading contents. The KFTC determined that the licensing terms were unreasonable in light of comprehensive portfolio licensing, unilaterally-defined royalty terms, and royalty-free cross-grant terms.

### ***4.3 Competition Law Assessment on FRAND Commitment***

It is questionable whether FRAND commitment infringements are anticompetitive per se or presumptively anticompetitive subject to rebuttal. This is a question of whether additional stage is needed to assess anti-competitiveness after the FRAND commitment infringements are found out. The KFTC views that infringing FRAND commitment is likely to be anticompetitive by itself, but it goes further to assess anti-competitiveness.

Argument that FRAND commitment infringements are anticompetitive bases the understanding that FRAND commitments are institutional competitive constraints by itself. Essentiality means that there are no substitutes in specific technologies. Once standard setting is made, it results in disappearance of competitive constraints in the same standard market. Other substitutable technologies before the standard setting, if any, are excluded artificially by standard setting that would have otherwise existed as competitive constraints in the process of competition to be included in the specific technology standard.

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<sup>19</sup>For critics for deciding whether there is discrimination based on comparison of different prices to 'one buyer' conditioned upon the amount of purchases, see Jinyul Ju, 'Recent developments in Korean antitrust cases concerning FRAND-encumbered standard essential patents' (2015) 8(2) Jindal Global Law Review 221.

However, in this case, it can be argued that discrimination is based on the fact that the effects are attributed to Qualcomm and its competitors in the modem chipset markets in a discriminatory way.

Influence of SEPs can be lessened when (i) standard is not the only one but with substitutable standard already existing and/or (ii) competition with goods not using such standard is available or entry of new goods are possible in the market. Before the adoption of the new standard, there might be competition between substitutable technologies for the inclusion of the new standard. This is competition ‘for the market’ as opposed to competition ‘in the market’. Despite the end of competition for the same market with the adoption of the new standard, there could still be competitive pressures from inter-standard competition. But there remains no competition in the market if there is no inter-standard competition at all. This is what happened to mobile communications standard technology in the 4th generation. In the mobile communications market, inter-standard competition existed in the 2nd generation standard (CDMA-19%, GSM-81%), then such competition was weakened in the 3rd generation (WCDMA-85%, CDMA 2000-13%, TD-SCDMA-2%), and disappeared by being unified to LTE in the 4th generation standard. Especially, in the LTE standard there are no alternative standards nor components alternative to modem chipsets using the LTE standard. Thus, an SEP holder has incentive and capacity to abuse SEPs after selected as a standard technology. In this situation, FRAND commitment becomes more and more significant because it can play a role as an institutional complement for competitive constraints which are artificially removed.

In order to harmonize with patent law objectives, it is necessary to require proving of exceptional circumstances supporting anti-competitiveness. However, the degree of proving could be eased in the situations of FRAND commitment infringements.<sup>20</sup>

## **4.4 Theories and establishment of Competitive Harm**

### **4.4.1 Theories of Competitive Harm**

Theories of competitive harm means theoretical frameworks explaining mechanism that the effects on markets arising from an enterprise’s conduct give rise to weakening of competitive constraints or competitive pressure deriving from competitors or trading partners. Such theories should (i) be logically consistent, (ii) reflect the incentives that various parties face, (iii) be in line with the available empirical evidence, and (iv) articulate how consumers have been/will be harmed.<sup>21</sup>

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<sup>20</sup>Bjorn Lundqvist, ‘The Interface between Competition Law and Standard Essential Patents - Some Early Comments on the *Huawei Case*’ (2015) European Competition Journal 371 <<https://ssrn.com/abstract=2688257>> (stating that the situation in which an SEP holder subject to FRAND commitment refuses to license on FRAND terms triggers new exceptional circumstance doctrine).

<sup>21</sup>Hans Zenger and Mike Walker, ‘Theories of Harm in European Competition Law: A Progress Report’ in Jacques Bourgeois and Denis Waelbroeck (eds), *Ten Years of Effects-Based Approach in EU Competition Law* (Bruylant 2012).

Such theories are also combined with counterfactual method by which the current situation is compared with the hypothetical competitive situation.<sup>22</sup>

Theories of competitive harm can be classified as follows. More economic theories include predation analysis framework, raising rivals' cost analysis framework, anticompetitive foreclosure analysis framework, and leveraging of market dominance analysis framework. More normative theories include discrimination analysis framework, entry barrier analysis framework, exclusivity analysis framework, and essential elements analysis framework.

In two cases, the KFTC attempted to explain the competitive constraints by using various theories of competitive harm. In the 2nd case, based on raising rivals' costs analysis framework,<sup>23</sup> the KFTC presented an increase in competitors' costs resulting from Qualcomm's threats of attack on patent infringements and patent umbrella effects<sup>24</sup> as one of the grounds for anticompetitive effects. The leveraging of market dominance analysis framework<sup>25</sup> was used in both cases. One-way leveraging was concerned in the 1st case (leveraging from the technology market to the component market), while cross leveraging was contemplated in the 2nd case (leveraging from the technology market to the component market and vice versa). In the 2nd case, both offensive leveraging and defensive leveraging<sup>26</sup> were also concerned.

Discrimination analysis framework was primarily concerned with the 1st case of infringements of the non-discriminatory element of FRAND, but in the 2nd case, this framework was also relied upon as the effect of discriminating between Qualcomm's modem chipset purchasers with patent umbrella and purchasers of rival companies without it. The KFTC also used the essential elements analysis framework, which is based on recognizing SEPs as essential elements.<sup>27</sup>

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<sup>22</sup>For a general explanation about the use of the counterfactual method in EU competition law, See Damien Geradin and Ianis Grgenson, 'The Counterfactual Method in EU Competition Law: The Cornerstone of the Effects-Based Approach' (December 2011) <<http://ssrn.com/abstract=1970917>>.

<sup>23</sup>Steven Salop and David Scheffman, 'Raising Rivals Costs' (1983) 73 American Economic Review 267; Thomas G. Kattenmaker and Steven C. Salop, 'Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price' (1986) 96 Yale Law Journal 209.

<sup>24</sup>KFTC (n 14) 9.

<sup>25</sup>Daniel L. Rubinfeld, 'Antitrust Enforcement in Dynamic Network Industries' (1998) Berkeley Law Scholarship Repository 859 (explaining that leveraging occurs when a firm uses its advantage from operating in one market to gain an advantage in selling into one or more other, generally related markets).

<sup>26</sup>Offensive leveraging is about reaping additional monopoly rent from a second market, while defensive leveraging is about an attempt to defend the primary dominant position; Directorate-General for Internal Policies, 'Challenges For Competition Policy in a Digitalised Economy' (Study, July 2015) <[https://www.researchgate.net/publication/290429309\\_Challenges\\_for\\_Competition\\_Policy\\_in\\_a\\_Digitalised\\_Economy](https://www.researchgate.net/publication/290429309_Challenges_for_Competition_Policy_in_a_Digitalised_Economy)>.

<sup>27</sup>This seems to be a change from an earlier position in *Samsung v Apple*, in which the KFTC held that telecommunications SEPs were not an essential element, explaining that SEP holders are subject to a FRAND licensing obligation, and that since there are multiple SEP holders and thousands of SEPs for a cellular standard, it is different from a case where there is only a single essential element; Korea Fair Trade Commission, 'KFTC Determines That Samsung Electronics'

The KFTC also considered these adverse effects collectively because it has the effect of reinforcing each other through the feedback effect. The KFTC even attempted to compare Qualcomm's practice with SEP holder's injunction against willing licensees.<sup>28</sup> In view of the KFTC, Qualcomm's practice is worse than such an injunctive measure in terms of the nature and degree of competitive harm.

#### **4.4.2 Extent of Proving Competitive Harm**

The KFTC focuses on exclusionary effects as opposed to exploitative effects. Finding special circumstances in both cases may have affected articulating theories of competitive harms as well as setting up the extent of proving. The KFTC considered that three characteristics in relation to Qualcomm's business position and nature of conducts increased the likelihood that applicable theories of competitive harms could be really applied and thus decreased the extent of its proving. The three characteristics are (1) that the Qualcomm acquires dominant position through standard-setting and FRAND commitments, (2) that Qualcomm is vertically integrating enterprise dominant both in the technology market and the goods market, and (3) that breach of FRAND commitments results in elimination of institutional competitive constraints remaining in the SEPs license markets.

### **5 Comparison with Other Jurisdictions**

Qualcomm cases have also been investigated and sanctioned by other competition authorities outside of Korea. Japan is the first country to deal with Qualcomm case. The Japan Fair Trade Commission (JFTC) acknowledged that in 2009, Qualcomm's conducts infringed the Japanese Antimonopoly Act (AMA).<sup>29</sup> The National Development and Reform Commission (NDRC), one of China's three competition agencies, determined in 2015 that Qualcomm's conducts violated China's Antimonopoly Law (AML).<sup>30</sup> In early 2017, the Federal Trade Commission (FTC) of the US filed a complaint against Qualcomm in Northern

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Injunction Claim against Apple for Infringement of Standard Patents is not a Breach of the MRFTA' (2014).

<sup>28</sup>Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp.* EU:C:2015:477.

<sup>29</sup>Japan Fair Trade Commission, 'Cease and Desist Order against QUALCOMM Incorporated' (30 September 2009) <<http://www.jftc.go.jp/en/pressreleases/yearly-2009/sep/individual-000038.html>>.

<sup>30</sup>Liyang Hou, 'Qualcomm: How China has Invalidated Traditional Business Models on Standard Essential Patents' (2015) Journal of European Competition Law & Practice 686.

District Court of California for violating Section 5 of the FTC Act.<sup>31</sup> The Taiwan Fair Trade Commission (TFTC) joined the forces by imposing record fines of 23.4 billion Taiwan dollars (approximately 7.75 million US dollars) on Qualcomm for the violation of the Taiwan Fair Trade Act (TFTA) in October 2017.<sup>32</sup> Most recently, the European Commission (EC) fines Qualcomm 997 million Euro for abuse of dominant market position by making significant payments to a key customer on condition it would not buy from rivals.<sup>33</sup>

In the following, the author compares the types of behaviors in Korea with Japan, China, and the US in turn, and examine the commonalities and differences between the four competition authorities in terms of theories of competitive harm.

## 5.1 *Korea in Comparison with Japan*

In comparison with Korea, Japan's focus was narrowed down to specific restrictive trading conditions such as provisions of royalty-free license to Qualcomm and non-assertion of patents against Qualcomm and, customers of Qualcomm imposed on Japanese manufacturers of subscriber units or base stations, many of which have been engaged in the research and development of wireless telecommunications technologies. This conduct type can correspond to imposing royalty-free cross-grant terms in Korean 2nd case which was determined as unfair and unreasonable (Table 1).

## 5.2 *Korea in Comparison with China*

In China, three types of abusive behavior were examined, which were respectively (1) charging unfair high royalties, (2) tying non-SEPs license with license to SEPs, and (3) imposing unreasonable conditions in the sale of baseband chipsets. The first

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<sup>31</sup>Federal Trade Commission, 'FTC Charges Qualcomm With Monopolizing Key Semiconductor Device Used in Cell Phones' (17 January 2017) <<http://www.ftc.gov/news-events/press-release/2017/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used>>; Sivinski (n 13).

<sup>32</sup>Andy C. M. Chen, 'Investigation Competition Cases In Taiwan: Procedural Perspective' (*Competition Policy International*, 2017) <[https://www.researchgate.net/publication/316685925\\_Investigating\\_Competition\\_Cases\\_in\\_Taiwan\\_the\\_Inquisitorial\\_Principle\\_and\\_the\\_Abuse\\_of\\_Superior\\_Bargaining\\_Position](https://www.researchgate.net/publication/316685925_Investigating_Competition_Cases_in_Taiwan_the_Inquisitorial_Principle_and_the_Abuse_of_Superior_Bargaining_Position)>. The types of behaviors in the TFTC case are (1) refusing to license competing chip makers its SEPs, (2) conditioning the sale of its chips to device manufacturers on their signing the patent licensing agreement, and (3) forcing competing chip makers to accept unfavorable terms, which are much the same as in the KFTC case.

<sup>33</sup>European Commission, 'Antitrust: Commission Fines Qualcomm €997 Million For Abuse Of Dominant Market Position' (24 January 2018) <[http://europa.eu/rapid/press-release\\_IP-18-421\\_en.htm](http://europa.eu/rapid/press-release_IP-18-421_en.htm)>. Qualcomm's practices in this case are similar to the conduct of imposing conditional rebate in the first Korean case.

**Table 1** Comparison between Korea and Japan

Korea (2009, 2017)	Japan (2009)
Charging discriminatory royalties	
Imposing conditional rebates	
Charging royalties over expired patents	
Refusal or restriction of license to competing chipset makers	
Linking chipset supply with license to handset makers	
Imposing unfair and unreasonable terms with handset makers	Royalty-free license and non-assertion-of-patent provisions for manufacturers of semiconductor integrated circuits etc.

and second types of conduct find their equivalents in Korean cases. With regard to the first conduct type of charging unfair high royalties, two issues of charging royalties over expired wireless SEPs and requiring free cross-license from licensees made a basis of declaring Qualcomm's price as excessive. This can be compared with Korea's approach not relating the issues to excessive pricing. The second conduct type corresponds to comprehensive portfolio license issue as a part of the conduct type of unfair and unreasonable licensing terms with handset makers in Korean 2nd case, which the KFTC did not label as tying. The third type of conduct includes the condition in the sale of baseband chipsets requiring not to challenge the patent licensing agreement, which was not explicitly considered in Korea (Table 2).

**Table 2** Comparison between Korea and China

Korea (2009, 2017)	China (2015)	
Charging discriminatory royalties		
Imposing conditional rebates		
Charging royalties over expired patents	Charging unfair high royalties	Charging royalties over expired SEPs
Refusal or restriction of license to competing chipset makers		
Linking chipset supply with license to handset makers		
Imposing unfair and unreasonable terms with handset makers	Charging unfair high royalties	Requiring free cross-license from licensees
	Tying non-SEPs license with license to SEPs	
	Imposing unreasonable conditions in chip sales	

**Table 3** Comparison between Korea and US

Korea (2009, 2017)	US Allegation (2017)
Charging discriminatory royalties	
Imposing conditional rebates	
Charging royalties over expired patents	
Refusal to or restriction on license to competing chipset makers	Refusal to license at component level
Linking chipset supply with license to handset makers	No license, no chips policy
Imposing unfair and unreasonable terms with handset makers	
	<i>De facto</i> exclusive dealing with Apple

### 5.3 *Korea in Comparison with US: Conduct Types*

The FTC's complaint makes three major allegations concerning Qualcomm's anticompetitive behavior, which refers to (1) refusal to license at component level, (2) no license, no chips policy, and (3) *de facto* exclusive dealing with Apple. The first and second types of conduct can be matched with those of the Korean 2nd case. Both authorities adopt similar approach in that they derive theories of harm through Qualcomm's course of conduct.<sup>34</sup> The third type of conduct is a specific issue in the US (Table 3).

## 6 Conclusion

In terms of theories of harm, Korea focuses on exclusionary effects with Japan and US, while China focuses on exploitative effects. Korea, Japan and US focus on exclusionary effects in common, but differ in emphasis.

Korea applied the abuse of dominance clause under the MRFTA and challenged the SEPs license markets and chipset markets. In the US, the FTC alleged that Qualcomm's conducts were to maintain monopoly power or foreclose competition, and the allegation was that the conducts would constitute the stand-alone violation of unfair methods of competition provision under the Section 5 of the FTC Act. Both authorities have the common ground in that they found harm to competition from a refusal to license at the component level.<sup>35</sup> In contrast, Japan challenged

<sup>34</sup>Koren Wong and others, 'A Comparative and Economic Analysis of the US FTC's Complaint and the Korea FTC's Decision against Qualcomm' (2017) Competition Policy International Antitrust Chronicle <<https://www.competitionpolicyinternational.com/wp-content/uploads/2017/04/CPI-Wong-Ginsburg-Layne-Robins-Slonim.pdf>>.

<sup>35</sup>ibid.

Qualcomm's behavior as impediment of fair competition in the technology market because the JFTC applied the unfair trade practices clause under the AMA.

China focuses on exploitative effects unlike other countries. The reason seems to be that the NDRC mainly covers price-related antitrust enforcement. Exploitative effects on handset makers were recognized, taking various factors such as facilitating price increase (including expired SEPs) and preventing price decrease (excluding cross-license fee) into consideration. Exclusionary abuse character was also found, but unclear on whom it affects.

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# Chapter 10

## Regulating Standard Essential Patents in Implementer-Oriented Countries: Insights from India and Japan



Ashish Bharadwaj and Tohru Yoshioka-Kobayashi

### 1 Introduction

Growing diffusion of internationally standardized digital products dramatically has changed the global manufacturing industry. Today, very few firms are able to gain a significant market share or earn from patent royalties. To illustrate, in the smartphone industry, Samsung, Apple, and Huawei dominate 40% of global sales,<sup>1</sup> and Qualcomm makes a billion dollar only from patent licensing. A technology standard is one of the drivers of the global market creation. In the case of smartphones, wireless telecommunication standards play a key role. However, standards themselves do not determine the market power of the individual firms. Rather, it is the strategic use of Standard Essential Patents (SEPs) that affects the competitiveness of firms.

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<sup>1</sup>'Smartphone Vendor Market Share' (IDC, 2017) Q1 <<https://www.idc.com/promo/smartphone-market-share/vendor>> accessed 12 May 2018.

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As widely reported, this decade has experienced many legal disputes over SEPs. Courts, antitrust bodies, and government agencies as well as Standard Setting Organizations (SSOs), have discussed in length about issues of license refusals, reasonable royalty rates, and injunctive reliefs on infringements of the license of the SEPs.<sup>2</sup> Major policy actions have been taken in Europe and the United States (US). Antitrust bodies, like DG competition and Federal Trade Commission (FTC), have actively published various reports on SEP issues and have implemented several regulations.

Approaching from a policy perspective, the drafters should not merely extend their regulations to the rest of the world without understanding the specificities of our setting. There is a significant difference in the market realities. Initially, Europe, Japan, and the US had major SEP holders, especially in wireless communication standards but now, the rapid emergence of Chinese and Korean SEP holders has resulted in a staggering decline in the numbers of SEPs owned by the Japanese firms. In contrast with the increasing impact of Chinese companies, India, one of the largest emerging market, has seen very few SEP holders. Such differences may affect the policy decisions on regulation of SEPs.

This chapter discusses the SEP regulation in implementer-oriented countries, by comparing the recent policy change in India and Japan. In past five years, both these two countries have taken serious measures to introduce a series of regulations on SEPs. Their experiences provide various implications for public policies concerning the SEP issues.

Before entering into a specific discussion, it is important to clarify the general background of SEP issues, especially in the smart phone market. Smart phones are categorized upon the basis of standards that are required to classify a smartphone as 2G, 3G or 4G. These standards are set by the SSOs, which are important institutions that set out various technical standards in the field of technology. These standards are to be adhered by all the companies that are members of these SSOs. SSOs have been playing a major role in bringing a harmonization amongst the different market players, by making them voluntarily participate in maintenance of these standards.

SSOs play a major role in making available the SEPs to all the new entrants at fair, reasonable, and non-discriminatory (FRAND) rates. They prevent the SEP holders from abusing their dominating positions by ensuring that they trade their licenses only on FRAND terms. As the FRAND commitment does not specify any specific royalty rates, it forms a subject of dispute between various SEP holders and implementers. Nevertheless, SSOs have not yet touched royalty issues since any SSOs' actions requesting specific royalties potentially constitute a buyers' cartel.

As an inevitable result, national courts and competition law authorities have ruled on this issue. However, their decisions are not uniform. In India, for example, both the courts and the Competition Commission of India (CCI), a competition

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<sup>2</sup>Ashish Bharadwaj, Indranath Gupta and Sunita Tripathy, 'Introduction to the JGLR special issue on standardization, patents and competition issues: global developments and perspectives' (2017) 8(2) Jindal Global Law Review 117.

regulatory authority, have taken completely different approaches. While the CCI alludes to Smallest Saleable Patent Practicing Unit (SSPPU) as an appropriate base for royalty calculations, the Delhi High Court has relied on the end market price of the device. In Japan, only a single case has been decided on a reasonable royalty rate by multiplying the end market price of the device, contributions of the focal standard, and contributions of litigated patents.

Other than reasonable royalties, there are several legal issues over SEPs. Patent hold-ups, patent hold-outs, aggregated royalties, and an injunctive relief for FRAND committed SEPs are some of them. In the next two parts, the authors review case laws over SEPs in both India and Japan.

## 2 Indian Cases and Their Background

### 2.1 Overview of the SEP Cases in India

#### 2.1.1 Global SEP Owners v Local SEP Implementers

Beginning of SEP litigation in India was marked by the case of *Philips v Bhagirathi*.<sup>3</sup> For the first time, Delhi High Court used interim measures as a remedy and directed the defendant to deposit ₹ 45 per DVD player. Not a long time has passed since smartphone litigation has started in India particularly, Ericsson has filed a number of infringement suits against the Indian manufacturers.<sup>4</sup> In *Ericsson v Kingtech*,<sup>5</sup> Ericsson had filed an application before the Commissioner of Customs, complaining against the goods imported by Kingtech. It was reported that the said goods infringed several of the SEPs owned by Ericsson. As a result, the commissioner detained those goods. Aggrieved by these restrictions, Kingtech approached the Delhi High Court, which decided against Ericsson on two grounds: (i) the commissioner in this case did not have the authority to make such determinations and (ii) the due procedure was not followed by Ericsson. Consequently, Ericsson filed for an appeal against this order and got a decision in its favour. It was decided that a fresh order be issued by the commissioner recording an adequate reason to believe that Kingtech's goods infringed the patent rights owned by Ericsson. Later, the High Court passed an order restraining Kingtech from importing any goods that could infringe Ericsson's patent rights.

Interestingly, there are many cases between Ericsson and various other market players concerning the same issue of SEP infringements. It is important to see how

<sup>3</sup>*Koninklijke Phillips N.V v Bhagirathi Electronis & Ors.* (2017) Delhi High Court, CS (OS) 1082/2009.

<sup>4</sup>Ashish Bharadwaj, 'A note on the neglected issue of reverse patent hold-up' (2018) 13 (7) Journal of Intellectual Property Law & Practice <<https://doi.org/10.1093/jiplp/jpx224>> accessed 3 May 2018.

<sup>5</sup>*Telefonaktiebolaget LM Ericsson (PUBL) & Ors. v Kingtech Electronics (India) & Ors.* (2016) Delhi High Court, CS (COMM) 239/2016.

the Indian jurisprudence has evolved over time, attempting to reconcile the market realities with policy discourse. Following the *Kingtech* case, Ericsson filed another case against Micromax Informatics Limited claiming an infringement of eight of its SEPs including 3G, AMR and Edge technologies. The High Court of Delhi passed an interim relief in its favor directing Micromax to pay adequate royalties.<sup>6</sup> Post this; Micromax approached the CCI, complaining against the abusive use of power by Ericsson. The CCI challenged the said order in the High Court, which decided that while deciding this case the CCI has overstepped its authority as defined under the Competition Act. It prevented the CCI from passing any final order on this matter until the court proceedings were completed and an interim royalty was fixed that was to be paid during the pendency of the suit. Meanwhile, Ericsson made several complaints of non-compliance by Micromax. In 2016, the High Court of Delhi finally decided favorably on the competence of CCI to conduct investigation in this case. This highlights an intersection between the The Competition Act 2002 and Intellectual Property (IP) provisions. Courts have suggested a harmonious reading of both the Acts as they provide for different recourse. IP Act aims exclusively at protecting the individual rights, where as, on the other hand, the Competition Act is set up to regulate the market so as to introduce a fair play mechanism.<sup>7</sup> Recently, on 5 February 2018, Delhi High Court passed an order stating that Ericsson and Micromax have entered into a Global Patent License Agreement on 26 January 2017. Both the parties have agreed to withdraw all their pending disputes. Court also held that the amounts agreed should be released as decided by the parties.<sup>8</sup> In 2016, Ericsson also sued Gionee,<sup>9</sup> a Chinese vendor over the infringement of the same eight SEPs as in *Micromax*. Hereby an interim royalty was fixed by the Delhi High Court, calculated on the basis of the royalty rates awarded in the case of *Micromax*.

In a similar case of *Ericsson v Intex*,<sup>10</sup> a complaint was filed against Ericsson for abusing its dominant position to the deterrence of other players in the market. It was argued that the licensing terms proposed by Ericsson were discriminatory and unreasonable. Intex claimed that the non-disclosure agreement as required by Ericsson constituted undue restraints. It also prevented Intex from evaluating its licensing terms as opposed to any other company dealing with Ericsson for the

<sup>6</sup>*Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (PUBL) & Ors.* (2016) Delhi High Court, FAO(OS) 75/2016.

<sup>7</sup>Sahithya, ‘Ericsson v Micromax—A Kick-Start to SEP-FRAND Antitrust Jurisprudence in India’ (*Kluwer Competition Law Blog*, 13 July 2016) <<http://competitionlawblog.kluwercompetitionlaw.com/2016/07/13/ericsson-v-micromax-a-kick-start-to-the-sep-frand-antitrust-jurisprudence-in-india/>> accessed 4 May 2018.

<sup>8</sup>*Telefonaktiebolaget LM Ericsson (PUBL) v Mercury Electronics & Anr.* (2017) Delhi High Court, CS (COMM) No. 155/2017.

<sup>9</sup>*Telefonaktiebolaget LM Ericsson (PUBL) and Ors. v Gionee Communication Equipment Co. Ltd & Anr.* (2016) Delhi High Court, CS(COMM) No. 1533/2016.

<sup>10</sup>*Telefonaktiebolaget LM Ericsson (PUBL) and Ors. v Intex Technologies(India) Ltd* (2014) Delhi High Court, CS(OS) No. 1024/2014.

same license. On the aforementioned basis, the CCI decided to investigate the matter against Ericsson. It was convinced about a *prima facie* case of abuse of dominance by Ericsson. This decision was then appealed in the High Court of Delhi contending the jurisdiction of the CCI on this matter. Ericsson argued that any issue regarding a claim for royalty would fall exclusively within the scope of Patents Act 1970. Following from the judgement of Micromax, the court decided that nothing in the IP Act ousts the jurisdiction of the CCI and hence both the acts have parallel application. However, while deciding on the issue of patent infringement by Intex, the court decided in the favour of Ericsson and ordered that royalties be paid by Intex.

In another case of *Ericsson v Xiaomi*,<sup>11</sup> an infringement claim was filed against Xiaomi for using various SEPs owned by Ericsson without acquiring a license for the same. As a result, an interim injunction was imposed on Xiaomi for further selling its products which infringed the said SEPs. Xiaomi appealed this order and got a decision in its favour. On 22 April 2016, while deciding this case Delhi High Court found out that Xiaomi already had a license from Qualcomm, which in turn had a license with Ericsson. Hence, a decision was passed in the favour of Xiaomi.

Recently, Ericsson filed a case against Lava claiming an infringement of the eight SEPs. Rejecting the defence presented by Lava, the Delhi High Court decided in favour of Ericsson.<sup>12</sup> It was recorded that Ericsson had produced a *prima facie* case of the essentiality of its patent and was willing to negotiate with Lava on FRAND terms. On enquiry, it was found that Lava itself was responsible for delaying an amicable contract.

In another case, Best IT World (India) Private Limited (iBall) brought a complaint against Ericsson before the CCI. It was alleged that through its exorbitant royalty rates and inflexible non-disclosure agreement, Ericsson was attempting to abuse its dominant position in the market.<sup>13</sup> On perusal of the facts and evidence, the Commission decided that Ericsson was not complying with its FRAND obligations and was in contravention with Section 4 of the Competition Act.<sup>14</sup> It was found that the royalty rates demanded by Ericsson was not based on an objective evaluation of the functionality of their product but on the final price of the product on which the patented product is used. The case was finally settled outside the court.

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<sup>11</sup>*Xiaomi Technology and Anr. v Telefonaktiebolaget LM Ericsson (PUBL) and Ors.* (2016) Delhi High Court, FAO(OS), 2016.

<sup>12</sup>*Lava International Limited v Telefonaktiebolaget LM Ericsson (PUBL)* (2016) Delhi High Court, FAO(OS) (COMM) 45/2016.

<sup>13</sup>*Best IT World(India) Private Ltd v Telefonaktiebolaget LM Ericsson* (2015) Competition Commission of India, Case No. 4 of 015, Order dated 12 May 2015.

<sup>14</sup>The Competition Act 2002, s 4.

### **2.1.2 Litigations from Indian SEP Holders**

Apart from Ericsson, there are several other players who have managed to set their foot in the Indian IP market and have added substantially to the understanding of SEP litigation herein. In 2014, Vringo Infrastructure Incorporation filed a patent infringement suit against ZTE and its Indian subsidiaries alleging infringement of their patent titled ‘a method and a device for making a handover decision in a mobile communication system’.<sup>15</sup> Similar suits were filed by Vringo against ZTE in various other jurisdictions. Initially, the Delhi High Court granted an ad interim ex parte injunction on the manufacture, import, sale, use, or advertisement of ZTE’s infringing products. However, ZTE challenged the injunction and received an order in its favour. The court agreed with ZTE that Vringo was unable to make a *prima facie* case and that despite being aware of the infringement it did not take any action against ZTE for a long time. The court decided that the balance of convenience fell in favour of ZTE and that no irreparable harm was caused to the plaintiff. Hence, the Injunction granted to Vringo was vacated. However, conditions of bank guarantees were levied on ZTE.<sup>16</sup> The matter was finally resolved outside of court when ZTE paid a sum of \$21.5 million to Vringo in order to acquire a non-exclusive right over its SEP portfolio.

In another case, Vringo sued AsusTek Computer Inc. and one of its distributors for infringement of a non-SEP, entitled ‘Method and system for providing wireless communication using a context for message compression’.<sup>17</sup> In its response, Asus claimed that the technology it was using was licensed to it by Google. Later, Google requested for attachment as a party to the suit. However, the case was withdrawn in late 2016, as the parties decided to reach a settlement outside of court.

In 2016, Dolby filed a suit against two major Chinese companies namely, Oppo<sup>18</sup> and Vivo.<sup>19</sup> Dolby claimed that both these companies infringed its patent rights by using its audio technologies without having acquired a license for the same. As per the order passed by the Delhi High Court, both the companies were directed to pay the arrears to Dolby at a royalty rate of ₹ 34 per handset. In return,

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<sup>15</sup>*Vringo Infrastructure Inc, & Anr. v ZTE Corporation & Ors.* (2014) Delhi High Court, FAO(OS) 369/2014.

<sup>16</sup>*ibid.*

<sup>17</sup>*Vringo Infrastructure Inc, & Anr. v ZTE Corporation & Ors.* (2014) Delhi High Court, CS(OS) 1050/2014.

<sup>18</sup>*Dolby International AB & Anr. v GDN Enterprises Private Limited & Ors.* (2016) Delhi High Court, CS(COMM) 1425/2016.

<sup>19</sup>*ibid.*

they were allowed to continue selling and manufacturing. Meanwhile, parties decided to refer to mediation for setting up of further licensing terms of their contract.<sup>20</sup>

### **2.1.3 Discussions on Case Laws**

The aforementioned case laws highlight the constantly evolving SEP jurisprudence in India. While many new players are entering the domestic market, it is important to clarify the Indian legal position on some relevant issues. As seen above, the Delhi High Court and CCI have often taken different positions on various issues. They gain their jurisdiction from two different statutes namely, The Patent Act 1970 and The Competition Act 2002. Both the institutions have different objectives which in turn leads to completely different outcomes. CCI uses the approach of Smallest Saleable Patent Practicing Component (SSPPC) while the Delhi High Court has relied upon the net price of the Downstream Product and also resorting to the comparison of the licenses.

It is difficult to set a standard for deciding the interim royalty rates. However, it is important that courts also consider necessities of the domestic market in order to come up with effective solutions to these disputes. Most of the Indian litigants are licensees and not the patent holders. If an interim injunction is provided every time a complaint is filed, it will keep the prices of the products high and will act as a deterrent for the consumers.<sup>21</sup>

## **2.2 Adjudication Process/Legal Framework in India**

There are five key SSOs in India namely, the Telecom Standard Development Society of India (TSDSI), Telecommunication Engineering Centre (TEC), Bureau of Indian Standards (BIS), The Global ICT Standardization Forum for India (GISFI) and the Development Organization of Standards for Telecommunications in India (DOSTI). TSDSI is public-private partnership entity run by participation of all the stakeholders together, the government, service providers, manufacturer, researchers and vendors. It evaluates and works on customised standardised solutions for the Indian telecom market.<sup>22</sup> TEC unlike TSDSI, is a completely

<sup>20</sup>Anjana, 'Patent Infringement Suit by Dolby against Oppo and Vivo' (*Khurana & Khurana*, 27 December 2016). <[http://www.khuranaandkhurana.com/2016/12/27/patent-infringement-suit-by-dolby-against-oppo-and-vivo/?utm\\_source=mondaq&utm\\_medium=syndication&utm\\_campaign=view-original](http://www.khuranaandkhurana.com/2016/12/27/patent-infringement-suit-by-dolby-against-oppo-and-vivo/?utm_source=mondaq&utm_medium=syndication&utm_campaign=view-original)> accessed 18 February 2018.

<sup>21</sup>Raghavi, 'Demystifying the Indian FRAND Regime: The Interplay of Competition and Intellectual Property' (2016) 21 Journal of Intellectual Property Rights 89.

<sup>22</sup>Telecom Standard Development Society of India <<http://www.tsdsi.org/>> accessed 21 February 2018.

government based organisation and develops standards for the telecom equipment and services. It also coordinates with the other SSO worldwide and participates in the global standardisation.<sup>23</sup> BIS on the other hand, is the National Standard Body of India established under the BIS Act 1986. It operates various industries, each through a division council. Currently, it works with 14 Division Councils and over 650 Technical Committees that have so far developed over 19,000 Indian Standards.<sup>24</sup> GISIF is another organisation that seeks to ensure a coherent standardisation regime for information and communications technology (ICT) sector. Its participants include domestic and foreign firms, policy makers, academicians and regulators.<sup>25</sup> DOSTI is a private SSO working on the development of standards. Its members include market players within India and outside. All of these institutions promote negotiations based on FRAND terms.

In case of non-compliance, parties have an option of reaching out to regulatory bodies. In India, there are two main regulatory bodies, the Intellectual Property Appellate Board (IPAB) and the CCI. The IPAB exercises its jurisdiction over matters pertaining to Trademarks, Patents, Geographical Indications and Copyright.<sup>26</sup> Section 77 of the Patents Act 1970 empowers the controller with certain powers of a Civil Court.<sup>27</sup> IPAB was formed for speedy disposal of appeals and applications, for the rectification of registered trademarks and the decisions passed by the Controller, which then lay before the High Courts.<sup>28</sup> Injunctions are granted if the plaintiff can prove a *prima facie* case of infringement, a balance of convenience in its favour and an irreparable loss that it would incur in case the injunction is not granted.<sup>29</sup>

Competition Commission on the other hand, stems from the antitrust legislation aimed at ensuring accessibility of goods to the wider consumer base and maintaining a healthy competition in the market in order to regulate the industry. Both the institutions have a parallel jurisdiction. The aforementioned Section on the Indian case laws is indicative of the different approaches adopted by the two institutions for similar issues. While the CCI has taken a stringent view on anti-domination policies, the High Court has made attempts to balance the antitrust concerns with the market realities. This tussle between the two institutions points towards the inconsistency in the Indian position.<sup>30</sup> It is important to protect the domestic Non-SEP holding companies and the foreign portfolio holders.

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<sup>23</sup>Telecommunication Engineering Centre <<http://www.tec.gov.in/>> accessed 18 February 2018.

<sup>24</sup>Bureau of India Standards <<http://www.bis.gov.in/>> accessed 21 February 2018.

<sup>25</sup>The Global ICT Standardization Forum for India (GISFI) <<http://www.gisfi.org/>> accessed 21 February 2018.

<sup>26</sup>Intellectual Property Appellate Board <<https://ipabindia.org/Jurisdiction.aspx>> accessed 21 February 2018.

<sup>27</sup>The Patent Act 1970, s 77.

<sup>28</sup>GISFI (n 25).

<sup>29</sup>Code of Civil Procedure 1908, Order 39 rule 1.

<sup>30</sup>J. Gregory Sidak, 'FRAND in India: The Delhi High Court's emerging jurisprudence on royalties for Standard Essential patents' (2015) 10 Journal of Intellectual Property Law & Practice 609.

Time is of key importance in any Intellectual Property Right (IPR) dispute and hence new developments have been made in the judicial system to accommodate such needs. The Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts Act 2015 (CC Act) has been enacted by the Indian Parliament to hear commercial disputes, including IPR disputes related to patents.<sup>31</sup> It provides with strict time limits and involvement of expertise in the field of commercial law. However, it is important to note that the requirement of expertise is limited to the knowledge of commercial law with no specific experience in IP or any other concerned issues.

## **2.3 Recent Policy Developments in India**

### **2.3.1 DIPP Discussion Paper on SEPs (2016)**

On 1 March 2016, the Department of Industrial Policy and Promotion (DIPP) came up with its Discussion paper on SEPs and their availability on FRAND terms, with an objective of inviting views and suggestions from various stakeholders in order to develop a suitable policy framework to define the obligations of SEP holders and their licensees.<sup>32</sup> It undertakes an in-depth analysis of the approach taken by various other jurisdictions in order to understand the issues that lie before the Indian system. They invite responses on various issues, namely:

- (i) The need for additional legislation apart from the existing Patent Act 1970 and the antitrust legislation; (ii) the requirement of an IPR policy to be used by the SSOs for developing standards for telecommunication sector and the other sectors in which SEPs are used; (iii) the need for prescribing guidelines for the working of these SSOs; (iv) the issue of prescribing a guideline for deciding the royalty rates with respect to SEPs by the Government of India or any other relevant authority; (v) the basis on which the aforementioned royalty rates need to be decided; (vi) the need to cap the total payment of royalty in case of particular product and the authority which can make such decisions; (vii) the use of non-disclosure agreement to misuse the dominant position in the market; (viii) the appropriate mode and remedy for settlement of disputes in matters related to SEPs, especially while deciding FRAND terms, focusing specifically on the remedy of injunction; (ix) methods that can be taken to make the practice of cross-licensing effective so as to ensure that the royalty rates are fair and reasonable; (x) steps that could be taken to ensure a transparent practice of patent pooling; (xi) tools to be used to determine whether a patent declared as SEP is actually an essential patent, particularly when bouquets of patents are used in one device; (xii) a need of setting up of an independent expert body to determine FRAND terms for SEPs and devising a methodology for such purpose; (xiii) a process to

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<sup>31</sup>Shamnad Basheer, ‘Specialised Courts (III): Commercialising the High Courts?’ (*SpicyIP*, 17 February 2016) <<https://spicyip.com/2016/02/specialised-courts-iii-commercialising-the-high-courts.html>> accessed 12 May 2018.

<sup>32</sup>Department of Industrial Policy and Promotion (DIPP), Government of India, ‘Discussion Paper on Standard Essential Patent and their availability on FRAND terms’ (2016) 3.

declassify such an SEP, in case where certain standards can be met without infringing any particular SEP, for instance by use of some alternative technology or because the patent is no longer in force.<sup>33</sup>

Several institutions have submitted their comments on the aforementioned issue put forth by the DIPP. In the response submitted by George Mason University School of Law, they have highlighted some of the key problems with the Indian way of understanding the issue of SEP litigation.<sup>34</sup> Most of the responses make an argument against the need of introducing a new legislation in order to deal with FRAND related problems. Antitrust laws as they exist today provide enough space for a case-to-case solution based on a uniform methodology grounded in economic analysis of the fact situation.<sup>35</sup> Furthermore, it is argued that imperfection in the market should not be a substantial reason for regulation unless the said regulation is capable of increasing the efficiency substantially.<sup>36</sup>

On the issue of IPR policy, while most of the institutes insist on a structural change of the system to enhance transparency and efficiency of the licensing mechanism, they also propose against the idea of providing a particular set of guidelines for the working of the SSO. The reason being that it will prevent the SSO from approaching the cases as per their specific needs.<sup>37</sup> Some of the key issues that SSOs need to consider include the essentiality of an SEP, disclosure rules requiring a timely provision of the information about an SEP to the SSO, need of interference by the SSOs to prevent the abuse of FRAND allowances by the licensees and promotion of negotiation as a tool to resolve the disputes over royalty.<sup>38</sup>

On the question of royalty rates, most of the institutions emphasize on the importance of party autonomy in deciding the issues. They argue that capping the royalty rate will meddle with the market forces and discourage innovation and business acumen. Many institutions have laid down their own standards for deciding the basis on which royalty rates in SEPs should be decided.<sup>39</sup> In cases where numerous SEPs are used in one particular device, it is suggested that certain factors be considered. For instance, it is important to differentiate between the cumulative value of the SEPs included in a given standard and the aggregate royalty burden that includes at least some supra-FRAND rates.<sup>40</sup> Perhaps the risk of hold-ups can be reduced by proper apportionment, that is, if the multi-component products are priced according to the value of each patent's contribution to the end

<sup>33</sup>ibid 26–27.

<sup>34</sup>George Mason University School of Law, ‘Comment on the Discussion Paper on Standard Essential Patents’ (2016).

<sup>35</sup>Jindal Initiative on Research in IP and Competition, ‘Response to the questions raised in the Discussion Papers released by DIPP’ (2016).

<sup>36</sup>DIPP (n 32).

<sup>37</sup>ibid.

<sup>38</sup>George Mason (n 34).

<sup>39</sup>DIPP (n 32).

<sup>40</sup>ibid.

product. Hence, the entire market value rule (EMVR) would be the preferred measure to determine royalties as it would account for the functional value of an SEP and it would also take into account the value added by the portfolio to an end device. It is also important to pay attention on the number of SEP holders instead of the number of SEPs. If most of the SEPs are held by one player, then the risk of monopoly increases. Even if the SEPs are held by different players, they might be more inclined to cooperate with each other, together they have an interest in standardisation of their product.

The next issue that they deal with is the use of non-disclosure agreement by the patent holders to assert their dominating position in the market. Delhi High Court's decision in *Ericsson v Intex*,<sup>41</sup> favours NDA as a legitimate constraint and considers it to be important to maintain the confidentiality regarding some sensitive issues. It is important to strike a balance between the desire for transparency and the fact that patent licenses often include the confidential business information of both the licensor and licensee.<sup>42</sup> For the similar reason, they also argue against the transparency of patent pooling and cross-licensing. This information can easily be requested in specific instances but to require the companies to share such information in public might affect their business strategies. Discriminatory licensing might, in fact, serve legitimate purpose of increasing the consumer welfare and helping the innovating company recoup their development cost.<sup>43</sup>

An injunction has always been seen as an important tool in patent licensing. It protects the right of the patent holder in case of any infringement. Unavailability of this remedy might promote the infringers to abuse the SEP system by demanding for rates less than the FRAND terms. It might be regulated in order to ensure a remedy to the SEP holder, in case the infringer is not willing to enter into a license on FRAND terms.<sup>44</sup> Regarding the issue of an adequate dispute resolution mechanism, the institutions have looked upon arbitration as a successful method that would provide flexibility and means for parties to arbitrate and resolve issues mutually by engaging experts in various subject matters instead of opting for complicated judicial procedures.<sup>45</sup>

### **2.3.2 TRAI Discussion Paper on SEPs (2017)**

In 2017, another consultation paper was published by the Telecom Regulatory Authority of India (TRAI) inviting responses on key issues affecting the local

<sup>41</sup>*Intex* (n 10).

<sup>42</sup>Joint Comments of the American Bar Association Section of Anti-trust law, Intellectual Property Law, International Law, and Science & Technology Law on the Government of India's Discussion Paper on Standard Essential Patents and their availability on FRAND terms' (*American Bar Association*, 2016).

<sup>43</sup>*ibid.*

<sup>44</sup>DIPP (n 32).

<sup>45</sup>George Mason (n 34).

telecom manufacturing unit. It discusses in detail the concerns that currently prevent the industry from growing. Telecom industry around the world is growing at an increasing pace and local manufacturers find it difficult to catch-up with the rapidly changing technology.<sup>46</sup> They also face heavy competition from the foreign companies who are able to provide products at a cheaper price. The industry is stuck in a vicious circle with zero import duties and high cost of domestic protection. In a previous recommendation submitted by TRAI in 2011, it suggested tax reliefs for the hardware-manufacturing units. However, no such benefits have been provided till date. Apart from this, lack of clarity on IPR issues is another problem that heavily impedes the growth of local industries.<sup>47</sup>

Post liberalisation, Government took various steps to enhance the efficiency of the telecom industry. This was a big step from a closed government-run sector to completely open market. In 1994, first National Telecom Policy (NTP) was introduced with the aim of opening up competition in the market for basic and other value-added services. In the next NTP of 1999, the objective was to increase the accessibility of affordable and efficient communication services to a larger consumer base. The idea was to encourage development of telecommunication in all the remote, hilly and tribal areas. In 2012, NTP finally started to focus on the manufacturing and standardisation of the telecommunication equipment by the local companies. Investments were made to promote indigenous research and development. The vision was to make India a hub of telecom equipment manufacturing. Another Policy on Electronics was formulated in the same year, in order to boost the domestic manufacturing units and improve their presence in the global market. In order to cater to the ever-growing need for research and development, an Electronic Development Fund was established. Apart from this, various other steps including creation of a joint task force on mobile manufacturing unit, laying down of skill development policies and encouragement of local manufacturers through preferential market access schemes, were also taken to ensure a structural change.<sup>48</sup>

In light of these advancements, TRAI proposed several issues that need to be dealt with in order to achieve its goal of boosting the local manufacturing units. Following are the issues put forth for consultation:

- (i) Reasons behind the lack of investments in the telecom equipment sector and the poor performance of local telecom manufacturing industry in spite of numerous initiatives by the government/industry;
- (ii) Required measures to boost innovation and productivity of local telecom manufacturing;
- (iii) Sufficiency of the existing patent laws in India to address the issues of local manufacturers;
- (iv) Adequacy of the existing mechanism of Standardisation, Certification and Testing of Telecom Equipment to support the local telecom manufacturing;
- (v) Suggestion for appropriate dispute resolution mechanism for determination of

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<sup>46</sup>Telecom Regulatory Authority of India, 'Consultation Paper on Promoting Local Telecom Equipment Manufacturing' (Consultation Paper No. 12/2017), ch 2.

<sup>47</sup>ibid.

<sup>48</sup>ibid, ch 3.

royalty distribution based on FRAND terms; (vi) Sufficiency of the current fiscal incentives; (vii) Determination of other issues under ITA which need to be addressed for making the local Telecom Manufacturing more competitive and robust; (viii) Suggestion to increase foreign investments in order to promote innovation and (ix) evaluation of the current preferential market access regime.<sup>49</sup>

Responses submitted by the stake holding institutions have a detailed analysis of each of these issues. It has been argued that the poor performance of the manufacturing industry is because of the unproportionate consumer demands in the sector. Although, the demands are expected to increase in the coming years, the present demand rates do not justify a substantial investment. Hence, introduction of export-friendly mechanism would be a better approach.<sup>50</sup> For a very long time Indian markets have followed standards developed by the international institutions. This creates an additional pressure on the local industry to meet those standards. Instead, it is important to work on customised standards for the Indian market.<sup>51</sup> Changes are not required in the existing patent regime. They incorporate a wise range of provisions to deal with the concerned issues. However, policies can be made to strengthen the mechanism of Standardisation, Certification and Testing of Telecom Equipments adequate to support the local telecom manufacturing. Although this might help improve the standard of products in the market, and also expected to increase the end costs.<sup>52</sup>

The consultation paper raises some very important questions regarding royalty rates and efficiency of the existing system. However, certain wordings of the paper suggest a lack of understanding of TRAI on the core issues. The paper assumes that SEP holder is obliged to provide a FRAND undertaking. It is important to acknowledge that FRAND commitments are entered into voluntarily by the patent holders.<sup>53</sup> Royalty rates are at the core of any SEP-related issues. Amongst the responses submitted, there's a consensus that arbitration would be an appropriate mechanism for dealing with these issues. It provides with a confidential environment, expert engagement and is based on a party autonomy model.<sup>54</sup> Other Alternative Dispute Resolution (ADR) methods including negotiation and mediation, based on party centric models, would also be preferable.

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<sup>49</sup>ibid, ch 4.

<sup>50</sup>Europe India Chamber of Commerce, ‘Written comments on the Consultation Paper “Promoting Local Telecom Equipment Manufacturing”’ (2017).

<sup>51</sup>Jindal Initiative on Research in IP and Competition, ‘Response to the questions raised in the Consultation paper on promoting local telecom equipment manufacturing’ (2017) 3.

<sup>52</sup>*Intex* (n 10) 11.

<sup>53</sup>Fraunhofer- Gesellschaft, ‘Consultation paper on promoting local telecom equipment manufacturing (Response)’ (2017) 4.

<sup>54</sup>ibid; *Intex* (n 52); George Mason (n 34).

### **3 Japanese Policy Changes and their Background**

#### ***3.1 Legal Framework in Japan***

In contrast to India, Japan has adopted the continental legal framework. Three written codes set the majority rules in this field. The Patent Law lays down the legal rights of patent holders. The Anti-Monopoly Act regulates the general principles against monopoly and unfair trades. Detailed principles on unfair trades are disclosed in Designation of Unfair Trade Practices (Designation) and multiple guidelines specify criteria for implementation of Anti-Monopoly Act and the Designation.

The Patent Law is silent about the technology standard. However, a couple of provisions are related to SEPs. Article 92 of the law defines a compulsory license for the improvement of inventions and Article 93 set up another type of compulsory license based on public interest. There are no specific rules or ordinances on Article 93, but lawyers and policymakers refer to a report published in 1968 from an experts group under Foreign Capital Council. The report states that such license should be permitted only when it is directly connected to lives of the citizens and the refusal of the license would result in crippling the development of the related industries. Their interpretation emphasizes limited applications of this compulsory license. Also, Article 92 has been substantially suspended in accordance with the US-Japan Agreement in 1994. The Agreement stipulates that any compulsory license based on improvement inventions should not be ordered without a court or administrative decision, which proclaims the violation of anti-monopoly laws. As a result of these strict conditions, no compulsory license has been directed so far.<sup>55</sup>

The anti-monopoly laws regulate some part of the SEP issues. In 2007, Japan Fair Trade Commission (JFTC), a government body which has jurisdiction on anti-monopoly regulations, published a new guideline on the assertion of IPRs, titled 'Guidelines for the Use of Intellectual Property under the Antimonopoly Act'. The guideline, prefacing that the license refusal in principle does not always constitute a monopoly, referred that in case of any assertions, which deviate from the nature of IPR protection, can be constituted as an unfair trade practice. However, there was no direct mention of SEPs before 2016.

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<sup>55</sup>Japan Patent Office, 'Wagakuniniokerusaiteiseidonitsuite [Reports on compulsory license of patents in Japan]' (Report, 2004) <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/strategy\\_wg07/paper08.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/strategy_wg07/paper08.pdf)> accessed 4 January 2018 (In Japanese).

### 3.2 Cases Over SEPs

#### 3.2.1 *Apple v Samsung* Tokyo District Court Decision and IP High Court Decision

The first of SEP litigation in Japan appeared in 2011. As a part of global smartphone patent war, Apple and Samsung battled in Japanese courts. In April 2011, Samsung filed a lawsuit, which claims a temporary injunction to stop infringement of Samsung's SEPs of UMTS standard. These SEPs are under FRAND declaration of European Telecommunications Standards Institute (ETSI). Apple soon offered a license agreement and two parties sat at the negotiation table, but to no avail. In September, Apple filed a counterclaim requesting a confirmation of the absence of any damage to Samsung. Apple raised several arguments to support their request. Firstly, Apple claimed that they did not implement concerning SEPs. Secondly, even if they implemented it, Apple does not infringe these SEPs due to the exhaustion doctrine. These SEPs are implemented on a baseband chipset, which was allegedly sold by Intel. Thirdly, they advocate that Samsung already entered into a licensing agreement due to their FRAND declaration. Finally, Apple claimed abuse of dominance by Samsung on the grounds that it breached its obligation to negotiate in good faith and of timely disclosure of SEPs, and violated the anti-monopoly laws. Apple's argument on good faith negotiation was based on Article 6.1 of the ETSI's IPR Policy.

Tokyo District Court on 28 February 2013 found that, based on ETSI's IPR Policy, Samsung was obliged to disclose their SEPs at the right time and to negotiate in good faith with those willing to obtain license, but the company breached both its obligations. The court also added that Samsung's lawsuit for a temporary injunction could engage them in patent hold-up. Regarding the good faith negotiation obligation, Samsung refuted Apple's willingness to license since their proposed royalty rate was far from Samsung's request and thus it did not make an offer based on FRAND terms. However, the court did not mention whether the proposal satisfies FRAND condition.

These decisions have received a wide range of criticism against the validity of their conclusion and their unpredictability. According to the decision, SEP holders cannot claim any royalty once they have breached the obligation. Subsequently, Samsung appealed to IP High Court.

In its appeal, Chief Judge Iimura made a challenging attempt. The court announced an invitation of public comments on restrictions of injunctions and damages of SEPs. It is similar to an amicus brief, as known to the common law jurisprudence. Japan, however, does not have any such system officially.<sup>56</sup> 59 opinions were submitted from academia, IP experts, lawyers, business firms, and individuals. These comments included both the industrial and legal concerns. Many

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<sup>56</sup>For the sake of formality, public opinions were submitted to attorneys of both plaintiff and defendant, and they presented them to the court.

of the debates on Japanese law interpretation, mention three legal basis to restrict injunctions or excessive royalty requests—based on FRAND committed SEPs; a third-party beneficiary contract and immanent limitations of patent injunctions, and an abuse of patent rights.<sup>57</sup> These comments confirmed the legal discussion raised by leading scholars.<sup>58</sup>

The Grand Panel of IP High Court, on 16 May 2014, dismissed Samsung's request for injunctions against the willing licensees, regarding it is an abuse of their patent rights. The decision considered both the reasonable expectation of the licensors and willingness of the licensees of these FRAND committed SEPs. It pointed towards the negative influence of the injunction of these SEPs to the sane development of the industry.

The panel also prohibited claiming damage outside of FRAND condition.<sup>59</sup> In other words, contrary to District Court decision, the court ordered royalty payment within FRAND condition. To calculate FRAND royalty rate, the bench firstly computed the proportion of contributions of UMTS standards according to their use in Apple's products. Secondly, the ratio of contribution of focal SEPs is estimated within the proportion. Subsequently, the court set the maximum rate to prevent excessive aggregate royalty. Finally, the ratio is multiplied by the number of Samsung's SEP families per total SEPs' families. In this case, the ratio is stated as 5% of contribution of UMTS. Calculated royalty was almost 10 million Japanese Yen (approximately 10 thousand US dollars).

### **3.2.2 One Blue Case**

The second SEP case in Japan was decided in 2017. Imation Co., a US-based Blu-ray disc manufacturer, had been negotiating with One Blue LLC to receive a license. While One Blue requested the same royalty rate with all the other licensees, Imation claimed lower royalties within the FRAND condition. In 2013, One Blue sent warning letters to distributors of Imation's products to suspend the sales of Blu-ray discs. These recipients soon stopped selling Imation's products. Imation filed a suit against One Blue in the District Court of Tokyo requesting the court to

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<sup>57</sup>Toshifumi Futamata and Shogo Matsunaga Shogo, 'Apple v Samsung daigougi hanketsu ikensho no gaiyou to bunseki [An analysis of public comments on Apple v Samsung IP High Court Grand Panel Decision]' (2015) 55(3) Journal of LES Japan 113 (In Japanese).

<sup>58</sup>Institute of Intellectual Property, 'Hyouzyun kikaku hissu tokkyo no kenri koushi ni kansuru chosa kenkyu [Research on the assertion of SEPs]' (2011) <[https://www.iip.or.jp/summary/pdf/detail11j/23\\_iip\\_main.pdf](https://www.iip.or.jp/summary/pdf/detail11j/23_iip_main.pdf)> accessed 4 May 2018 (In Japanese); Institute of Intellectual Property, 'Hyouzyun kikaku hissu tokkyo no kenri koushi ni kansuru chosa kenkyu (II) [Research on the assertion of SEPs (II)]' (2012) <[https://www.iip.or.jp/summary/pdf/detail12j/24\\_01\\_full.pdf](https://www.iip.or.jp/summary/pdf/detail12j/24_01_full.pdf)> accessed 4 May 2018 (In Japanese).

<sup>59</sup>*Imation v One Blue* (2014) Intellectual Property High Court, Case No. 10043(ne) of 2013, Order dated 16 May 2014.

prevent them from sending these letters. They claimed that these warning letters to the distributors of Imation were to demonstrate their right of injunction of SEPs, are an abuse of rights and amounts to a false allegation of infringement of relevant patent rights, which is prohibited under Unfair Competition Prevention Act.

Before the court passed its decision, JFTC announced a closing of investigation in an Anti-Monopoly case.<sup>60</sup> JFTC regarded One Blue's behaviour as amounting to interference with the competitor's transaction, which violates the Unfair Trade Practices. However, they also found that there was no on-going violation after April 2016, thus they did not grant any cease and desist orders.

Tokyo District Court, on 18 February 2017, decided that the warning letters amounted to a false allegation.<sup>61</sup> The court while referring to IP High Court Decision in *Apple v Samsung* case, prohibited injunctions against willing licensees. The judge also applied the criterion of a willing licensee presented at the decision. In this case, the court concluded that Imation is a willing licensee, considering that Imation proposed a specific royalty rate but One Blue substantially rejected any negotiations.

In contrast to India, very few SEP litigations were filed in Japan. Both cases emphasized upon the good faith negotiation. However, these decisions did not show a concrete criterion of faithful negotiation.

### **3.3 Amendment of Guideline on Antimonopoly Law**

The first policy change happened in Japan was in 2015. JFTC, recognizing the importance of clarification of criteria for regulating SEP issues, announced the draft of partial amendment of 'Guidelines for the Use of Intellectual Property under the Antimonopoly Act'. The agency also collected public opinions. They received 54 comments from various stakeholders including government agencies (FTC, and Fraunhofer Society), IP expert societies (American Intellectual Property Law Association, Intellectual Property Owners Association, and Licensing Executive Society Japan), firms, lawyers, and scholars. Multiple organisations commented on its broad definition of SEPs and several other ambiguous phrases.

As a reaction to these opinions, JFTC published a modified amendment in January 2016. The amendment clarifies that a refusal of license or request of injunction against willing licensees can be an interference with a competitor's transaction and would constitute a violation of the Designation. The document also states that a willing licensee is determined by individual situations of license

<sup>60</sup>The Japan Fair Trade Commission, 'Closing the investigation on the suspected violation by One-Blue, LLC of the Antimonopoly Act' (18 November 2016) <<http://www.jftc.go.jp/en/pressreleases/yearly-2016/November/161118.html>> accessed 2 May 2018.

<sup>61</sup>Tokyo District Court, Case No. 2138(wa) of 2013, Order dated 18 February 2017.

negotiations, based on various factors such as disclosure of exact SEPs in concern and actual conditions of these implementations, presenting of license terms and their reasonable grounds, immediate response to these proposals and provide a rational alternative, and whether their attitude is faithful. It is notable that original draft described that a refusal of license or injunction to willing licensees constitutes a violation. However, the modified draft has relaxed this criterion.

### ***3.4 Intellectual Property Dispute Resolution System Review Committee<sup>62</sup>***

While JFTC referred to the abuse of injunctive relief, IP experts debated extensively the restrictions on injunctions. In 2015, following the trend, Intellectual Property Strategy Promotion Headquarters, an advisory board under the Prime Minister of Japan, set the issue as the point of discussion for its special committee, i.e. the IP Dispute Resolution System Review Committee. The committee aimed at discussing all the major issues in an IP dispute like evidence collection procedures, damage calculation, and restrictions on injunctions.

Even this topic was combined with the issues from patent assertion entities. The final report of the committee, published in March 2016, did not support any unified restrictions. Instead, they concluded that no legal change was needed and that the restrictions should be judged on a case-by-case basis. Regarding SEPs, the report mentions that unified restrictions may, in fact, reduce incentives for the standardization and induce a weaker patent protection regime in emerging economies.

### ***3.5 Intellectual Property System Study Group for the 4th Industrial Revolution<sup>63</sup>***

The rapid growth of ‘Internet of Things (IoT)’, ‘Industries 4.0’, or ‘connected industries’ raises further concern about SEPs. They have been an issue mainly in the wireless telecommunication industry, but in the IoT era entities involved in automobiles, home electronics appliances, and industrial equipment industries are predicted to be involved in SEP disputes more frequently. Ministry of Economy,

<sup>62</sup>Intellectual Property Dispute Resolution System Review Committee <[http://www.kantei.go.jp/jp/singi/titeki2/tyousakai/kensho\\_tyoka\\_kikaku/2016/dai5/sankou2.pdf](http://www.kantei.go.jp/jp/singi/titeki2/tyousakai/kensho_tyoka_kikaku/2016/dai5/sankou2.pdf)> accessed 4 January 2018 (In Japanese).

<sup>63</sup>Ministry of Economy, Trade and Industry, ‘Intellectual Property System in Consideration of the Fourth Industrial Revolution’ (April 2017) <<http://www.meti.go.jp/press/2017/04/20170419002/20170419002.html>> or <[http://www.meti.go.jp/english/press/2017/0419\\_001.html](http://www.meti.go.jp/english/press/2017/0419_001.html)> accessed 5 January 2018.

Trade and Industry (METI) established a study group on IP system in 2016. This group covered a wide range of IP issues, such as the legal protection of data, the IP protection on Artificial Intelligence (AI) creations, and resolutions of SEP disputes.

In April 2017, the study group published a report, which mentions two concerns regarding SEPs. Firstly, a growing number of SEPs and limited coverage of patent pools over SEPs that increases the cost of license negotiations and patent disputes. This cost erects a barrier to entry for Small and Medium Entities (SMEs). They are also anxious about the social cost from these patent transactions as the IoT can be an essential part of the social infrastructures. Secondly, non-practising entities (NPEs) could probably disrupt the SEP licensing market. Even though NPEs are not active in Japan, many Japanese firms reported the influence of NPEs.

At the same time, the report from IP Dispute Resolution Committee quoted they are sceptical about uniform restrictions of injunctions based on SEPs. Instead, they propose an ADR system, in which the government decides the reasonable royalty. Their report argues as follows:

It will be necessary to take initiatives to deal with SEPs, which will become a part of public infrastructure in line with the popularization of IoT. We will need to find ways to reduce the costs of licensing negotiations and settling disputes that may hinder the smooth use of the SEPs.

First, the government will consider introducing an ADR system (licensing award system for SEPs) designed to deal with disputes on licensing of SEPs, which have a significant influence on society. Under this system, government will work on disputes between patent holders and possible licensees based on request by the latter, when the parties cannot reach agreements on licensing, deciding appropriate licensing fees of SEPs with due care of not unfairly harm the interests of the patent holders.<sup>64</sup>

### ***3.6 Recent Policy Developments in Japan***

#### ***3.6.1 Intellectual Property Strategic Program 2017<sup>65</sup>***

Following the report from the study group, in May 2017, the Intellectual Property Strategy Headquarters announced that the government started a policy consideration on the special ADR system for SEPs. In their ‘Intellectual Property Strategic Program 2017’, they requested the METI to discuss the necessity and design of such a resolution, which determine a reasonable royalty of SEPs. The new ADR is scheduled to be under discussion in the next year. The policy document also

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<sup>64</sup>ibid 21.

<sup>65</sup>Intellectual Property Strategy Headquarters, ‘Intellectual Property Strategic Plan 2017 (2017) <[http://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20170516\\_e.pdf](http://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20170516_e.pdf)> accessed 4 February 2018.

requests to give the same attention to the right of SEP holders as the benefit of potential licensees.

Amidst the spreading of IoT, for the promotion of smooth use of standard specifications for technologies to serve as social infrastructure, reach specific conclusions as to the prospective legal measures within FY2017 and take necessary measures for an ADR system for determining reasonable license fees for standard essential patents with significant social impact (standard essential patent awarding system), while paying attention not to give undue impact on the right of patentees, with a view to submitting a bill to the next ordinary session of the Diet.<sup>66</sup>

Although the document is silent about the governing body of the ADR, a Japanese newspaper leaked out that the Japan Patent Office (JPO) will establish a new ‘adjudication’ system.<sup>67</sup> This choice of words followed the argument in Patent System Subcommittee.

### **3.6.2 Patent System Subcommittee of Industrial Structure Council**

As a response to the report from Intellectual Property System Study Group for the Fourth Industrial Revolution, JPO started a policy discussion in Patent System Subcommittee of Industrial Structure Council, an advisory board. In the 20th meeting, held in April 2017, JPO proposed two distinct ADRs: an ADR, which would determine the reasonable royalty rate of SEPs, and a general ADR for patent disputes. Regarding the former ADR, JPO named it as SEP adjudication.

This proposal initiated a heated debate in the committee. Several committee members from the industry or patent attorney association supported an introduction of SEP adjudication.<sup>68,69</sup> However, some industrial associations raised their discomfort with the said idea. Their main concerns are regarding effectiveness and social impact of this new proposition.<sup>70</sup> Firstly, the coverage of this adjudication will be too small in the current business environment. It will cover only Japanese patent while the vast majority of SEPs have multiple international patent families. Secondly, it increases the complexity of legal dispute resolution process. As long as there are no special restrictions, SEP holders can bring a patent infringement

<sup>66</sup>ibid 28–29.

<sup>67</sup>‘License ryo kuni ga saitei: hyouzyun kikaku ni saiyou no tokkyo [The government arbitrage the royalty rate of SEPs]’ *Nikkei Newspaper* (April 27 2017) 4 (In Japanese).

<sup>68</sup>Japan Patent Office, ‘Shorthand notes of the 20th meeting of Patent System Subcommittee of Industrial Structure Council’ <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/tokkyo\\_seido\\_menu/newtokkyo\\_020.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/tokkyo_seido_menu/newtokkyo_020.pdf)> accessed 8 March 2018.

<sup>69</sup>In the debate in Intellectual Property Strategy Headquarters, one advisory who are from chemical industry sector and corporate executive association was in the favor of the introduction of ADR.

<sup>70</sup>See comments from Japan Electronics and Information Technology Industries Association (JEITA). <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo\\_shiryou22/01.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo_shiryou22/01.pdf)> and Keidanren <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo\\_shiryou22/02.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo_shiryou22/02.pdf)> (In Japanese).

lawsuit to the court. This way the resolution processes will become double-tracked. Thirdly, JPO has no experience to judge a reasonable royalty. Industry associations requested for an intensive capacity building to this effect. Finally, such a public ADR could probably distort the private ADR activities. Another opinion fears a negative perception of Japanese SEP regulation in the global industry. Keidanren warned that the SEP adjudication could be regarded as a compulsory license, which is unpopular among the industry. Keidanren also has opposed it in India.

Faced with these objections, JPO sought a complementary policy option. In September 2017, they started the collection of public opinions regarding the guidelines on SEP license negotiations. This proposal aimed at collecting practical knowledge in these negotiations and clear up opinions on fair and reasonable royalty. Such knowledge is useful not only for the adjudication body but also for firms outside the telecommunication industry. In the call for public opinion, they did not show a specific draft of the guidelines but simply made an open question of items to be included therein. Generally, the guidelines will not be legally binding, but the public opinion collection legitimizes its power in litigations.<sup>71</sup>

Finally, JPO gave up the idea of introducing the SEP adjudication. Nikkan Kogyo Shinbun,<sup>72</sup> a Japanese newspaper, reported in November 2017 that they recognized the unfairness of the adjudication in concern, which only SEP implementers can claim. The newspaper also reported the difficulty in deciding reasonable royalty caused due to the variety of appropriate royalty rate accepted in the industry. Their recognition is in line with the report<sup>73</sup> published by the same subcommittee in February 2017 as a response to Intellectual Property Strategic Program 2016, which requested for consideration of construction of general patent royalty database to stimulate time-saving license negotiations and to increase compensations in patent infringement cases. In the report, they concluded that a royalty database is meaningless considering the wide variety of patent licensing practices.

Alternatively, JPO suggested the introduction of a SEP licensing negotiation guideline as proposed in September and an advisory opinion system on the technological essentiality of SEPs.<sup>74</sup> They explained that the guideline does not aim to set new regulations but to collect court decisions from around the world and show

<sup>71</sup>NTT Data Institute of Management Consulting, Inc., ‘Kuni no gyousei kikan ga kouhyou shita guideline tou no zittai haaku no tameno chosa [A survey report on guidelines published by the government]’ <[http://www.soumu.go.jp/main\\_content/000424429.pdf](http://www.soumu.go.jp/main_content/000424429.pdf)> accessed 31 December 2017 (In Japanese).

<sup>72</sup>‘Tokkyocho ga ADR seido miokuri: License ryo no settei konnann (JPO gave up the introduction of ADR because of the difficulty in setting reasonable royalty)’ *Nikkan Kogyo Shinbun* (November 27 2017) (In Japanese).

<sup>73</sup>Patent System Subcommittee of Industrial Structure Council, ‘To strengthen IP dispute resolution systems’ <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo\\_shiryou019/01.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo_shiryou019/01.pdf)> accessed 8 February 2018.

<sup>74</sup>Japan Patent Office, ‘Hyozyun hissu tokkyo wo meguru kadai to seidoteki taiou ni tsuite [Policy actions on SEP related issues]’ <[https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo\\_shiryou23/01.pdf](https://www.jpo.go.jp/shiryou/toushin/shingikai/pdf/newtokkyo_shiryou23/01.pdf)> accessed 8 February 2018 (In Japanese).

examples of faithful licensors and faithful willing licensees. In March 2018, JPO published a draft of ‘Guide to Licensing Negotiations involving Standard Essential Patents’ and invited public comments on the same.<sup>75</sup> The guide covers multiple issues from the faithfulness of parties in a negotiation, efficient negotiation process, to reasonable royalties. JPO mainly enumerates considerations mentioned by the international case laws and have not had any clear legal interpretations. This measured content is a reflection of JPO’s attitude to be an objective information provider to support SMEs or large firms outside the telecommunication industry. The guideline will be published in spring 2018.

In addition to that, concerning an advisory opinion, JPO has announced the introduction of a new policy whereby it would extend the scope of its scrutiny to the essentiality of a SEP. Although this determination would not have any legal nature, it would be beneficial in creating a platform for parties to set their negotiation terms without approaching the court for these issues. To prevent malicious abuse of this advisory opinion system, the draft of its procedure manual describes that petitioners have to be involved in litigations in which essentiality of specific declared SEPs are the issues.<sup>76</sup> A newspaper reported that the advisory opinion process would be designed to provide a conclusion within three months after the filing of the petition.<sup>77</sup>

## 4 Conclusion

As the Japanese ‘Fourth Industrial Revolution’ argument mentions, implementer-oriented countries are highly motivated to regulate SEPs to protect fair competition in the wide range of ‘connected’ manufacturing sectors. Especially, automobile industry or manufacturing machineries, manufacturers will need to receive SEP licenses in wireless telecommunications without any sufficient experience to negotiate with giant SEP holders. Under this condition, Indian and Japanese governments have a strong interest in the cost reduction of SEP licensing transaction by introducing ADR measures for royalty negotiations. However, as Indian debates raised by DIPP and TRAI discussion paper indicate, and as Japan’s

<sup>75</sup>Japan Patent Office, ‘Draft of Guide to Licensing Negotiations involving Standard Essential Patents’ (2018) <[https://www.jpo.go.jp/iken/pdf/180308\\_hyoujun/sep\\_guide\\_draft\\_en.pdf](https://www.jpo.go.jp/iken/pdf/180308_hyoujun/sep_guide_draft_en.pdf)> accessed 21 March 2018.

<sup>76</sup>Japan Patent Office, ‘Hyouyun hissusei ni kakaru handan no tameno hantei no riyou no tebiki (an) [Draft manual of the advisory opinion (Hantei) system concerning essentiality of standard essential patents]’ <[https://www.jpo.go.jp/iken/pdf/180216\\_hantei\\_tebiki/01.pdf](https://www.jpo.go.jp/iken/pdf/180216_hantei_tebiki/01.pdf)> accessed 21 March 2018 (In Japanese).

<sup>77</sup>Zyuyou tokkyo 3 kagetsu de hantei: Tokkyo chou shinseido saiban nashi de [And advisory opinion for influential patents within 3 months: JPO’s new policy]’ *Nikkei Shinbun* (21 February 2018) (In Japanese).

failure in the introduction of new adjudication induces, there are a bunch of challenges and questions to regulate SEP negotiations.

The largest challenge is information asymmetry. Reasonable royalties vary upon conditions of SEP holders and implementers. Some of them sell components while some deal with final products. Some implementers have SEPs to be licensed and some have non-SEPs, which are attractive for SEP holders. These differences link a variety of licensing conditions. As *One Blue* case shows, a fixed royalty is not always the only FRAND licensing condition. However, there are limited disclosures of licensing terms and conditions. It is impractical for governments to know reasonable licensing terms and conditions. In contrast, courts and antitrust authorities can access such information in SEP litigations as plaintiffs and defendants voluntarily disclose available licenses.

Another challenge is the expectation of being future dominant in standards. Even in implementer-oriented countries, they have a huge potential to be SEP giants. Especially, technology standards often offer emerging economies like India with a big opportunity to manufacture standardized products.<sup>78</sup> At the same time, this couples with the improvement of technological capability by learning-by-doing.<sup>79</sup> To illustrate, China had been a follower of wireless communication technologies. They only manufacture mobile handsets and smartphones. But now, in 4G standard, Huawei or ZTE, Chinese telecommunication equipment manufacturers, are one of the leading SEP holders.<sup>80</sup> Therefore, governments are hard to stand on a specific position.

Moreover, private mechanisms can resolve the vast majority of these licensing issues. Firstly, other than antitrust issues, many SEP holders have incentives not to request excessive patent royalties in order to stimulate the diffusion of standards as the global diffusion brings a large volume of sales of their products or revenues from patent royalties. Even in concerns of aggregated royalties, their actual occurrences is doubtful.<sup>81</sup> They are well aware that an opportunistic behaviour is not beneficial as, at the worst, such a behaviour promotes the introduction of

<sup>78</sup>Ogawa, Koichi, Junjiro Shintaku, and Tetsuo Yoshimoto ‘Architecture-based Advantage of Firms and Nations’ (2015) 4(3) Annals of Business Administrative Science 21 <[http://merc.e.u-tokyo.ac.jp/mmrc/dp/pdf/MMRC48\\_2005.pdf](http://merc.e.u-tokyo.ac.jp/mmrc/dp/pdf/MMRC48_2005.pdf)> accessed 8 February 2018.

<sup>79</sup>Linsu Kim, ‘Stages of development of industrial technology in a developing country: A model’ (1980) 9(3) Research Policy 254.

<sup>80</sup>Austin, ‘New iRunway Report Shows 40+% 4G-LTE Patents in US Filed By Asian Entities’ (*iRunway*, 27 March 2017) <<http://www.i-runway.com/technology-ip-news/press-releases/iRunway-4G-LTE-2016-update-report.html>> accessed 8 March 2018.

<sup>81</sup>Damien Geradin, Anne Layne-Farrar and Jorge Padilla, ‘The complements problem within standard setting: assessing the evidence on royalty stacking’ (2008) 14(2) Boston University Journal of Science and Technology Law <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=949599](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=949599)> accessed 29 November 2017; Kirti Gupta and Mark Snyder, ‘Smart phone litigation and standard essential patents’ (Hoover IP Working Paper Series No. 14006) <<https://ssrn.com/abstract=2492331>> accessed 29 November 2017.

alternative standards.<sup>82</sup> SEP holders have invested in research and development, thus, they are locked-into focal standards. Exceptionally, specific non-practicing entities, which have small number of SEPs, are free from such a constraint as their investments are small. However, if their patent portfolio sizes remain tiny, major locked-in SEP holders might file invalidity trials against them.

Secondly, transaction costs have been minimized by patent pools or component suppliers. Although they are not mandatory for SEP holders, the majority of successful standards associates patent pools (e.g., MPEG-2, DVD, and W-CDMA). Patent pools not only reduce transaction costs between licensees and specific licensors who joined the pool, but also their royalty rates can be used as a reference of reasonable royalties.<sup>83</sup> Most importantly, patent pool management firms have a strong commitment to diffuse the standard and not to withdraw SEP holders from the pool. Likewise, influential component suppliers can encapsulate a part of SEPs into a single license. Once, a component supplier obtains a license of relevant SEPs, the doctrine of patent exhaustion lets its customers be free from the burden of licensing negotiations of these SEPs.<sup>84</sup> In 3G wireless telecommunications, Qualcomm took the initiative in the market by realizing this capsule license.<sup>85</sup>

In conclusion, there is limited efficiency of *ex-ante* regulations on SEPs. Instead, *ex-post* regulations, such as ad hoc court decisions and antitrust orders, seem to be an effective and efficient measure to resolve SEP issues. In this regard, the authors emphasized on need for the capacity building of court judges and national competition agencies. As the DIPP report mentions, IP and antitrust relations are often left uninvestigated. Except in the US and Europe, very few case laws are accumulated. Governments can help these two agencies by conducting international surveys on SEP disputes and reasonable licensing conditions. In other words, governments should remain as a think-tank for courts and competition agencies.

Exceptionally, governments can play a key role to reduce a negative impact of the so-called patent trolls. Latest Japanese policy consideration of an expert advisory system of essentiality of declared SEPs is an effective measure for regulating these trolls. As discussed above, such trolls have little incentives to consider reasonable royalties. Invalidity trials are a measure for implementers to defend themselves, however, not all patents are invalidated. SSOs do not judge essentialities; even the system provides no-legally binding opinions, which could be useful for implementers.

This chapter discussed governmental regulations over SEPs in implementer-oriented country perspectives by comparing two representative countries; India and Japan. Even though these countries are followers in major

<sup>82</sup>For example, Nokia and Chinese firms developed alternative standards to CDMA2000, a Qualcomm dominant standard (see, Gawer, Annabelle and Michael A. Cusumano, ‘How companies become platform leaders’ *MIT Sloan Management Review* (1 January 2008)).

<sup>83</sup>*Microsoft Corp v Motorola, Inc* (2013) C10-1823JLR.

<sup>84</sup>*Quanta Computer, Inc v LG Electronics Inc* (2008) 553 US 617.

<sup>85</sup>Amelia Smith Rinehart, ‘Contracting Patents: A Modern Patent Exhausting Doctrine’ (2009) 23 *Harvard Journal of Law & Technology* 483.

global standards, like wireless communications, they do not take specific actions or failed to introduce implementer-side regulations. Rather, they seem to face a trade-off between the protection of their domestic manufacturers and the enhancement of prospects. The authors' arguments have two implications for policy makers. Firstly, governments should keep on providing information on SEPs. This knowledge sharing not only improves the capability of courts and antitrust authorities but also fulfils the information gap between global leading SEP holders and other firms. Secondly, governments should prepare some measures against small patent trolls.

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**Part III**

**Perspectives from Indian Competition and Patent Law**

# Chapter 11

## Predatory Pricing in Platform Competition: Economic Theory and Indian Cases



Aditya Bhattacharjea

### 1 Introduction

Predatory pricing, or pricing below costs in order to drive out one or more rival firms, has a long and convoluted history in both economic theory and competition jurisprudence. This already contentious issue has become even more complicated in the context of the new business models, largely based on information and communications technologies (ICT), that come under the rubric of ‘two-sided platforms’. The rise of gigantic ICT platform-based firms like Amazon, Apple, Facebook, Google and Microsoft has disrupted several industries and ignited impassioned debates involving policymakers, regulators, politicians, legal scholars and economists in many countries. Even pro-business conservative politicians, as well as the *Economist* and the *Wall Street Journal* have expressed concern about declining competition and the power of these ‘tech titans’.<sup>1</sup>

In this chapter, the author first provides a non-technical introduction to the economics of predatory pricing, showing why scholars and competition agencies in the United States (US) and European Union (EU) became increasingly sceptical of the feasibility of such a strategy. He shows how India’s old Monopolies and Restrictive Trade Practices (MRTP) Act of 1969 remained oblivious of these developments, and how despite several improvements, the poor drafting of the relevant sections of the Competition Act 2002 creates some unnecessary complications. The chapter then provides a non-technical introduction to the economics of

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<sup>1</sup>For a compilation of relevant quotations, see Section 2 of Carl Shapiro, ‘Antitrust in a Time of Populism’ (2018) International Journal of Industrial Organisation, to which the author can add the 20 January 2018 issue of the *Economist*, whose cover page is titled ‘The new titans and how to tame them’, with an editorial and a long critical article inside.

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platforms, with several examples that are familiar in the Indian context. Implications are derived for the antitrust treatment of predatory pricing. Finally, the author discusses how the Competition Commission of India (CCI) has dealt with some of these issues, in recent cases which have involved allegations of predatory pricing against the app-based taxi aggregators Ola and Uber, whose rivalry exemplifies platform competition.

## **2 Traditional Theories of Predatory Pricing and the Chicago Critique<sup>2</sup>**

A predatory pricing strategy appears simple enough. A firm (the ‘predator’) temporarily charges a price below its costs. The idea is that its rivals (the ‘prey’) will either lose their customers, or be forced to match the price reduction, thereby incurring losses that will drive them out of business. The predator can then charge monopoly prices and make up the losses it suffered while it was engaged in predation. Traditional economic analysis, as well as the legal framework in most countries, assumes that only an incumbent firm which already has a large share of the market will be able to benefit from predatory pricing after inducing the exit of its rival(s), who are usually treated as new entrants with small market shares. Until the 1970s, allegations of this kind often persuaded antitrust/competition agencies to act against predation. Thereafter, the growing influence of the so-called Chicago critique made them much more sceptical. Scholars associated with the Law School of Chicago University argued that predatory pricing was unlikely to be a profitable business strategy, for several reasons. First, precisely because it has a large market share, the losses incurred by a dominant firm that sets its prices below its costs will necessarily be larger than those of its intended victims. It might be argued that a predator with superior financial resources (colloquially referred to as ‘deep pockets’ or a ‘long purse’) can sustain a period of losses to drive out its rivals. But why can’t the prey also raise capital? Chicago adherents demanded a fuller explanation for firms’ unequal access to financial resources. In their worldview, there can be few monopoly positions durable enough to allow predators to recoup the profits they must sacrifice during the predatory campaign. If the market is large enough to accommodate more than one firm, an equally efficient prey can re-enter after the predator reverts to above-cost pricing, or other firms could enter, possibly after

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<sup>2</sup>This section and the next restate and update the discussion in Aditya Bhattacharjea, ‘Predation, Protection, and the ‘Public Interest’ (2000) 35(49) Economic and Political Weekly <[http://www.epw.in/system/files/pdf/2000\\_35/49/Predation\\_Protection\\_and\\_the\\_Public\\_Interest.pdf](http://www.epw.in/system/files/pdf/2000_35/49/Predation_Protection_and_the_Public_Interest.pdf)>. The author believes that this was the first comprehensive treatment of the law and economics of predatory pricing in the Indian context. Readers interested in the economic literature can refer to the references of that paper.

acquiring the assets of the erstwhile prey. Capital markets should also recognize this, and be prepared to finance firms that might be targeted for predation but are otherwise viable. The predator would then have nothing to show for its sacrificed profits. Finally, it makes more sense for a predator to buy out a rival firm than to engage in a mutually destructive price war.

Each of these Chicago School arguments is designed to show that predation is irrational (that is, it does not maximize profits, taking into account both the original sacrifice and the subsequent uncertain recoupment), and to economists this means that it will not be attempted. To the extent that (re-)entry into the industry remains feasible even if predation is successful, elimination of competitors is not the same as elimination of competition, and losses will be hard to recoup. This reasoning influenced the US Supreme Court in the landmark *Matsushita* case of 1986, with the majority judgement citing several Chicago School writings, and famously declaring that ‘there is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful’.<sup>3</sup> Seven years later, in *Brooke Group*, the court opined that ‘unsuccessful predation is in general a boon to consumers’,<sup>4</sup> and laid down a stringent two-pronged test for identifying predatory pricing. The first condition to be satisfied was that the alleged predator’s prices were below ‘an appropriate measure of costs’. The court did not specify what measure would be appropriate, but both before and after this judgement, most lower courts employed the Areeda-Turner test, which requires the plaintiff to show that the defendant had charged a price below its average variable cost (AVC). This is relatively uncontroversial, because a price below AVC means that the firm is losing money on every unit it sells, although as seen below, it is difficult to apply in platform markets. The second condition laid down by the court was a ‘dangerous probability, of recouping [the alleged predator’s] investment in below-cost prices’.<sup>5</sup> This requires detailed analysis of the market and the industry, to provide a convincing demonstration that there are barriers to entry that will allow the alleged predator to recover its sacrifice of profits. This is hard to prove, and there have been no successful prosecutions of predatory pricing in the US since then.

The EU has not set such a high bar for predatory pricing cases. In 1991, the often cited *AKZO* decision of European Court of Justice (CJEU) held that while a price below AVC must always be regarded as abusive, even pricing above AVC may be abusive if the defendant had ‘a plan to eliminate a competitor’.<sup>6</sup> The latter allowed for documentary and circumstantial evidence of predatory intent, which would not be decisive in the US. In its 1997 *Tetra Pak* decision, the CJEU again held that a:

<sup>3</sup>*Matsushita Electric Industrial v Zenith Radio* (1986) 475 US 574.

<sup>4</sup>*Brooke Group Ltd v Brown & Williamson Tobacco Corp* (1993) 509 US 209.

<sup>5</sup>ibid.

<sup>6</sup>Case C-62/86 AK *AKZO Chemie v Commission of the European Communities* (1991) ECLI:EU:C:1991:286, paras 71–72.

price set below average variable cost must always be considered abusive. Predatory pricing may be penalised whenever there is risk that competitors will otherwise be eliminated without requiring additional proof that the undertaking in question has a realistic chance of recouping its losses.<sup>7</sup>

This position was firmly restated in 2009 in the *Wanadoo* case, in which the CJEU declared that ‘demonstrating that it is possible to recoup losses is not a necessary precondition for a finding of predatory pricing’.<sup>8</sup> Thus, the EU employs a price-cost test that allows for prices above AVC to be regarded as abusive if predatory intent and the risk of elimination of competitors can be established, while prices below AVC are presumed to be predatory without requiring that recoupment be demonstrably probable.<sup>9</sup>

### 3 The Game Theoretic Counter-Critique

In the 1980s, the Chicago consensus was challenged by several models of ‘rational predation’, which employed the techniques of game theory with asymmetric information (one party knows something that another does not). In one version of this story, if the prey does not know what kind of firm it is confronting, then the predator can build up a reputation for competing aggressively, by setting ‘irrational’ loss-making prices in some markets or some periods. This can pay off if it deters later entrants, or rivals in other markets. Alternatively, if the dominant incumbent’s cost is not known to its rivals, it might choose a low price to signal low costs, even if it actually has high costs. It can be shown that this possibility forces an incumbent who actually has low costs to set an even lower price. In another model with asymmetric information, the incumbent knows the characteristics of the market but the entrant does not. In this setting, the incumbent can reduce its price in such a way that the entrant cannot tell whether it has miscalculated demand or because the incumbent is engaging in predatory pricing. If the low price induces the entrant to infer a large enough probability on the former, it may quit, even if it may have withstood the latter. In another variant, directed against the Chicago contention that a predator should prefer merger to predation, predatory pricing may actually be a way of softening up the target as a prelude to a merger or takeover bid, so that it sells out at a lower price.

<sup>7</sup>Case C-333/94 P *Tetra Pak International SA v Commission of the European Communities* ECLI:EU:C:1996:436.

<sup>8</sup>Case C-202/07 P *France Télécom SA v Commission of the European Communities* (2009) ECLI:EU:C:2009:214, para 113.

<sup>9</sup>However, the ECJ’s *Post Danmark* opinion of 2012 (Case C-209/10 *Post Danmark A/S v Konkurrencerådet* (2012) ECLI:EU:C:2012:172) suggests some rethinking that will allow the effects (both positive effects on efficiency, and negative effects on competition and consumers) of allegedly predatory prices to be considered as an alternative to intent, when predation cannot be presumed.

Yet another version takes on Chicago by shifting the informational asymmetry to the capital market. If banks cannot observe firms' profits, they guard against bankruptcy by demanding higher interest rates from (or refusing to lend to) firms with lower equity. Predation then operates by reducing the value of the prey's equity, thereby tightening its external financial constraint. Finally, another model demonstrated that an incumbent may set a low price if this enables it to sell a larger volume of output which may involve short-term losses, but accelerates the process of cost reduction through 'learning by doing'. This assumes that there is a 'learning curve' relating costs to cumulative output over time. The reduced costs also diminishes the probability of (re-)entry by other firms, which was the Achilles' heel of static models of predatory pricing.

Although these game-theoretic models rehabilitated the possibility of rational predation, the implications for antitrust analysis are extremely complicated and hard to apply in specific cases. For one thing, the predatory price in all these models is not necessarily less than the incumbent's costs. Moreover, the likelihood of successful predation depends on the unobservable beliefs of the players and the counterfactual of 'non-predatory' pricing with accommodation of entry. The reputation models show that the characteristics of the market in which predatory pricing is alleged may not be relevant, since the predator may be willing to incur an irrecoverable loss in that market in order to acquire a fearsome reputation which will scare off rivals in other (geographic or product) markets. Unchallenged dominance in the latter markets in turn provides the deep pockets to finance the predatory campaign.

Even if an antitrust agency could somehow make a case that predation was intended, likely to succeed, and would permanently impair competition, it is not obvious that it should be penalized. The lower predatory price involves a trade-off: relative to the counterfactual, it makes consumers better off in the short run but worse off due to reduced competition in the long run. Matters become even more complicated if the predator permanently reduces its costs. Expanding sales so as to exploit a learning curve is a legitimate objective even without predatory intent, and even if it deters entry, is it any more objectionable than investing in new technology to reduce one's costs? Given all these complexities, and the fear that 'false positives' in predatory pricing cases would have a chilling effect on price competition, antitrust authorities have remained extremely reluctant to pursue such cases.

## 4 The Indian Legal Framework

Indian competition law remained oblivious of all these developments as long as the MRTP Act was in force from 1970 to 2009. The Act contained no explicit clauses on predatory pricing, but the MRTP Commission pronounced some manifestly erroneous orders, in which it held that low-priced imports from some foreign

suppliers were predatory, even though they collectively supplied only a tiny share of the domestic market and there was no evidence that prices were below any measure of costs.<sup>10</sup> Some rethinking was apparent in the 1999 report of the Raghavan Committee, which laid the foundations for India's Competition Act. In one of its many statements on the subject, it declared that 'predatory pricing is a discredited theory', which seemed to recognize the Chicago critique and US case law. But some members felt that it "is a pernicious practice warranting it being identified under the 'per se illegal category'". Ultimately, the Committee only recommended that 'it is better to treat predatory pricing as an abuse, only if it is unambiguously established and indulged in by a dominant undertaking'.<sup>11</sup> It prescribed a two-stage test resembling the Joskow-Klevorik test used in some American and British cases: first assess the market structure to determine whether a monopoly position attained by successful predation can be sustained, and then compare prices with costs.

These recommendations were incorporated and fleshed out in the Competition Act 2002, which explicitly included predatory pricing as a form of 'unfair or discriminatory' pricing, a prohibited abuse under Section 4, which pertains to the 'Abuse of a Dominant Position' (AoD). A dominant position is defined as 'a position of strength, enjoyed by an enterprise, in the relevant market, in India, which enables it to (i) operate independently of competitive forces prevailing in the relevant market; or (ii) affect its competitors in the relevant market in its favour.' Section 19(4) of the Act lays down 13 'factors', any or all of which the Commission 'shall have due regard to' in inquiring into whether an enterprise is dominant. These include market share, size and resources of the enterprise, size of competitors, and dependence of consumers on the enterprise. Criteria for defining the relevant product and geographical markets are also specified.

A predatory price is defined in Section 4 as 'a price, which is below the cost, as may be determined by regulations, of production of the goods or provision of services, with a view to reduce competition or eliminate the competitors'. The corresponding concept of cost, as specified in a Regulation adopted by the CCI shortly after the relevant sections of the Act came into force in 2009,<sup>12</sup> is 'average variable cost, as a proxy for marginal cost'. This is the Areeda-Turner test, but there is also a proviso 'that in specific cases, for reasons to be recorded in writing, the CCI may, depending on the nature of the industry, market and technology used,

<sup>10</sup>For a critical review of the MRTP Commission's orders, see Bhattacharjea (n 2).

<sup>11</sup>See ibid for a catalogue of the contradictory statements in the Report.

<sup>12</sup>The Competition Commission of India (Determination of Cost of Production) Regulations 2009 <[http://www.cci.gov.in/sites/default/files/regulation\\_pdf/cost\\_pro.pdf](http://www.cci.gov.in/sites/default/files/regulation_pdf/cost_pro.pdf)>. For an account of why the enforcement of the Act was delayed from 2002 to 2009, see Aditya Bhattacharjea, 'Of Omissions and Commissions: India's Competition Laws' (2010) 45 (35) Economic and Political Weekly <[http://www.epw.in/journal/2010/35/perspectives/omissions-and-commissionsindias-competition-laws.html?0=ip\\_login\\_no\\_cache%3Dcebf44ec1d71c50d8eafed4a2d945fea](http://www.epw.in/journal/2010/35/perspectives/omissions-and-commissionsindias-competition-laws.html?0=ip_login_no_cache%3Dcebf44ec1d71c50d8eafed4a2d945fea)>.

consider any other relevant cost concept such as avoidable cost, long run average incremental cost, market value'. Each of these cost concepts is defined in the Regulation; the author returns below to the strange case of market value as a measure of cost.

This approach to predatory pricing was a definite improvement over that of the MRTP Act. By explicitly requiring evidence of dominance and below-cost pricing, the Competition Act comes close to the EU model and is insulated against the kind of wayward interpretations that the MRTP Commission felt free to devise. However, as the author has documented in an earlier article,<sup>13</sup> the muddled wording of Section 4 of the Act (maladapted from Article 82—now 102—TFEU) is highly problematic, and its treatment of predatory pricing even more so. Unlike the adjacent sections on anticompetitive agreements and mergers, Section 4 of the Act does not require a test for anticompetitive effects, making it possible for the CCI to find any of the prohibited behaviours specified in the section (including predatory pricing) to be abusive per se.<sup>14</sup> Fortunately, as the author has documented in an earlier paper,<sup>15</sup> the CCI has set a high threshold for establishing dominance, and has treated it as a condition precedent to deciding on abuse, so this provision has remained untested.

Second, Section 4 carves out from the list of abusive practices any price (explicitly including predatory price) 'which may be adopted to meet the competition'. Despite the manifest origins of Section 4 in EU law, meeting the competition is not a defence that is permitted in the EU, as confirmed by the CJEU while upholding the judgement of the court of the First Instance in *Wanadoo*.<sup>16</sup> Finally, the inclusion in the Regulation of 'market value' as a possible alternative measure of cost is incomprehensible. Section 2(c)(vi) of the Regulation offers an absurd definition: 'market value means the consideration which the customer pays or agrees to pay for a product which is sold or provided or can be sold or provided'—in short, the price. So by this measure, predatory pricing is pricing below the price! Third, Section 27 allows the CCI to order the breakup of a dominant firm even before it has abused its dominance—a dangerous weapon, which has fortunately not been deployed.

Before turning to platform competition, the author would like to summarize very briefly the sole CCI case that pertained to predatory pricing not involving platforms. In 2012, India's state-owned Oil and Natural Gas Corporation (ONGC) had floated a tender for providing a range of technical services for its oil and gas exploration

<sup>13</sup>Aditya Bhattacharjea, 'India's New Competition Law: A Comparative Assessment' (2008) 4 (3) *Journal of Competition Law and Economics* 629–632; Reprinted in Eleanor Fox and Abel Mateus (eds), *Economic Development: The Critical Role of Competition Law and Politics* (Edward Elgar 2011).

<sup>14</sup>This was first pointed out by Subhadip Ghosh and Thomas Ross, 'India's New Competition Law: A Canadian Perspective' (2008) Canadian Competition Record 23.

<sup>15</sup>Bhattacharjea (n 13).

<sup>16</sup>*France Telecom* (n 8), paras 50–61.

activities for three years. (These presumably included services for its offshore drilling rigs—platforms of a very different kind). A losing bidder, HLS Asia, complained that Schlumberger had won the contract, covering almost all of ONGC's requirements, by quoting 'ridiculously' and 'unreasonably' low rates. However, HLS did not provide any data to establish that Schlumberger's bids were below its costs. Absent this evidence, the CCI held that no *prima facie* case could be made out, and closed the matter, without going into the questions of market definition and whether Schlumberger was dominant.<sup>17</sup> This case, in conjunction with the other unsuccessful AoD cases discussed in the author's earlier article, suggests that the two prongs of the dominance plus price-cost test can be applied in either order, and that failing either prong would result in dismissal at the threshold.

## 5 Platform Competition

The economics of platform competition is based on the idea of externalities: the effects of self-interested actions taken by one party on other parties. Two-sided platforms generate a kind of reciprocal positive externality between two distinct groups: the benefits to a participant on one side of the platform depend on the size and composition of the group on the other side.<sup>18</sup> In India, traditional village haats and cattle fairs have of course played this role for centuries, attracting buyers to locations where there are many sellers and vice versa. The distinguishing features of a networked platform are first, that it intermediates between heterogeneous groups whose members would benefit from being matched to particular members of the group on the other side; second, that the platform is operated commercially by a single economic entity, which can charge users on both sides an access or membership fee, and/or a fee per transaction. Shopping malls, stock exchanges, and multi-brand department stores fit this description. More recently, ICT has enabled e-commerce platforms of vastly greater scope. The most obvious examples are online retailers like Amazon, Flipkart, and Snapdeal, which give buyers access to a wider range of sellers, and sellers access to a larger number of buyers. Travel websites and on-line ticket-booking services for films and plays play the same role. (Consumers are usually not charged for access to most of these platforms, but it will be shown below that this is a profit-maximizing strategy that follows logically from the economics of platforms.)

Taxi service aggregators like Ola and Uber serve as platforms between individual taxi owners and customers by matching their locations. The more the taxis on one platform, the more quickly will a potential rider get a nearby vehicle willing

<sup>17</sup>*HLS Asia Limited v Schlumberger Asia Services Ltd.* (2012) Competition Commission of India, Case 80/2012, order dated 6 February 2013.

<sup>18</sup>Technically, this is what economists call an 'indirect network externality', but a full explanation would involve discussing the economics of networks and direct network externalities, which would take it too far afield.

to go where she wants; the more the customers who access a particular service, the more taxi owners will want to sign up for that service. Credit card associations like Mastercard and Visa facilitate payments from consumers to sellers via their banks, but platform logic operates here as well: consumers are better off if more merchants accept the card that they carry, and merchants are better off if more consumers carry the card that they accept. The same goes for payment wallets like Paytm and MobiKwik.

This matchmaking function is also performed by advertising media. For example, newspapers are a medium for matching advertisers and readers who are consumers, television channels mediate between advertisers and viewers, radio channels between advertisers and listeners, and Google and Facebook between advertisers and users. All these serve as platforms, because advertisers on one side get access to a larger number of potential customers, and at least some consumers on the other side appreciate access to a wider range of advertisements. The platform function is different from the other services being provided (news, entertainment, search, or social networking), but generates all or most of the platform's revenue.

Yet another kind of platform is the operating system (OS) that runs a personal computer, laptop, smartphone, tablet or videogame console. The more the users of a particular OS, the bigger the market for applications (apps) that can run on it, and the more the apps, the more users who will choose a device that uses that OS. Examples that readily come to mind are Apple's iOS, Google's Android, and Microsoft's Windows, as well as Nintendo, PlayStation and Xbox. A very different example would be platforms that facilitate matching between men and women. Standard examples in Western countries are nightclubs and dating websites; more familiar Indian examples would be matrimonial agencies and websites. A site (real or virtual) that attracts more men will be more attractive to more women, and vice versa.

In each of these examples, participants on one side of the platform value not just the size but also the composition of the group on the other side. Consumers benefit from platforms that sell or advertise products and services more suited to their tastes and purchasing power; sellers benefit from exposure to potential customers who are more likely to buy their products. For taxi apps, the location of the vehicle and rider is paramount; for prospective dates, brides and grooms, other eligibility conditions obviously apply.

What does any of this have to do with predatory pricing? The answer should be evident to anyone who has used Facebook, FM radio, Google, no-fee credit or debit cards, travel websites, ride-hailing apps, or freely downloaded software: these are available for free, and therefore necessarily below cost—even if the cost of supplying an extra post, song, listing, electronic payment, or download is negligible. For most of the other examples given in the preceding paragraphs, the price to users on one side of the platform is only a fraction of the cost of production and supply. For example, the price of newspapers and magazines is often less than the cost of paper and printing. If the platform is to break even, such under-pricing must be

recouped by ‘overcharging’ users on the other side. The externality described above results in a positive feedback effect between the number of users on the two sides. Success breeds success, with every increase in membership and usage on one side triggering an increase on the other side, further enhancing the attractiveness of the platform to users on the first side, and so on. Growth in the network’s size also allows it to spread its fixed costs over a larger volume of transactions, resulting in orthodox economies of scale on the cost side. The feedback effect can also work in reverse, with any loss of customers on one side of a platform causing defections on the other side, recoiling on the first side, and so on in a downward spiral. This can result in the market ‘tipping’ towards domination by one or two platform firms, as all the named examples in the preceding paragraphs show.

Once entrenched with a large number of users on both sides, a platform is hard to dislodge. A new entrant must necessarily begin with substantial investment and fewer users, and will therefore not attract more, unless it is willing to incur ruinous losses. The user-specific data (on shopping, commuting, or social networking patterns) amassed by an incumbent platform is also not available to potential rivals, making it a powerful barrier to entry, or ‘incumbency advantage’. Platforms can use this data to provide users with suggested matches that suit their tastes, but also to charge them personalized prices based on their observed willingness to pay, which can help with recoupment. The combination of below-cost pricing, recoupment, elimination of competition, and domination by one or two firms, makes this scenario appear suspiciously like predatory pricing.

This is where the economics of two-sided platforms tells us that there are other considerations at work. What is happening here is a standard response to an externality problem. Economic actors do not appropriate the benefits of any positive externalities that their actions generate, and need to be induced to perform more of those actions: in this case, joining and actively using a platform so as to induce participation on the other side. In order to be viable at all, the platform must have a critical mass of users on both sides. Therefore, it charges less from those on one side than it would have in a traditional ‘one-sided’ market, sometimes to the point of providing the service for free or even subsidizing it, as in the case of credit cards that offer ‘cash-back’ deals or reward points proportionate to the value of transactions.

The profit-maximizing price on each side of the platform therefore depends not only on the marginal costs and price-sensitivity (elasticity) of demand on that side, but also the costs and elasticity on the other side, as well as the strength of the demand externalities between the two sides. The resulting price structure may well involve below-cost pricing on one side of the platform and above-cost pricing on the other, so the prices on the two sides should not be seen in isolation from each other. Such asymmetric pricing may be a feature of a platform regardless of the presence or absence of rivals. Yet, the feedback effects discussed above set up a tendency towards a ‘winner takes all’ outcome, even if this was not the intention of the firm’s pricing behaviour. A price below cost cannot therefore be regarded as

predatory. On the other hand, a firm with predatory intent may indeed exploit a network externality by charging a low price on one side. But this price may have an exclusionary effect even if it is not below cost. Standard price-cost tests, therefore, are misleading and may result in both false positives and false negatives. A relatively recent strand of antitrust thinking looks at the personalized data that the platforms acquire from their users as the hidden ‘price’ of their services; it is difficult to see how such data can be valued for a price-cost comparison.

Apart from the complications that platform economics creates for price-cost tests, it also needs to be considered that some forces work against complete monopolization by a single platform, countervailing the inherent ‘winner takes all’ tendency described above. First, there may be diseconomies of scale due to congestion. This is evident in the case of brick and mortar platforms that are limited by capacity, such as nightclubs, malls, and stock exchanges. But congestion may also occur in virtual platforms with virtually limitless capacity, as participants find it increasingly difficult to find a match when the crowd on the other side becomes too large. Therefore, multiple platforms can cater to different groups so as to allow for targeted matching. Such market segmentation can be vertical, with different platforms serving consumers with different incomes (e.g. magazines, stores and websites that feature luxury products and services as against those which cater to a mass market). Or it can be horizontal, with platforms specializing in different locations, tastes or needs (e.g. malls or clubs in different parts of a city; TV channels specializing in different kinds of programming; newspapers catering to readers with different preferences; websites specializing in different kinds of products or services; Facebook for social networking v LinkedIn for professional networking). Second, the scope for one firm to take over the market is limited if users find it convenient to patronize more than one platform, or if they can easily switch to a rival platform, as with credit cards, nightclubs, newspapers or television channels. (This is technically known as ‘multi-homing’). For both reasons, different platforms can profitably co-exist.

On the other hand, depending on the nature of the industry and the platform, these countervailing forces may be too weak to offset the ‘winner takes all’ dynamics. Multi-homing could involve additional costs for users (such as paying multiple membership fees, visiting different locations, or learning different software commands). A single online platform can itself mitigate the congestion problem by building in search filters or an algorithm that helps different types of users to find matches in different categories, locations or price ranges, with lower search costs. This will reinforce the tendency towards a winner takes all outcome. But even if one platform ultimately dominates a particular market, it is not clear that users are worse off than with many competing platforms. If the dominant platform is well designed, users get access to a wider range of potential matches without the costs of multi-homing. Further, as compared to multiple competing platforms, a platform monopolist may well impose higher charges on the seller-facing side, enabling it to charge lower prices on the consumer-facing side. For many antitrust scholars, especially in the US, consumer welfare (in the form of lower prices) is the standard

by which to judge market outcomes. By this standard, market concentration in a single platform is not necessarily harmful.<sup>19</sup>

In recent years, several American antitrust scholars have begun to question whether the consumer welfare standard, and many other long-established antitrust principles, are relevant or desirable in dealing with giant ICT-based firms. Several such scholars are cited in a blockbuster paper by Lina Khan.<sup>20</sup> She argues persuasively that Amazon's incredibly low prices, leading to losses sustained for years at a stretch, betray a business strategy that privileges growth and market dominance over profit, at least over a very long horizon. She calls for abandoning the recoupment standard, and argues that the harmful effects of Amazon's behavior are felt in related markets that it has penetrated, quality degradation, reduction of choice, and price discrimination. Moving beyond the domain of consumer welfare, she draws on the legislative history of the American antitrust statutes to argue eloquently for a return to concerns with market structure and the competitive process rather than its outcome in terms of prices, and sensitivity to issues of dispersal of economic and political power. She recommends that predatory pricing by a dominant firm should be treated as presumptively illegal, subject to a few 'business justifications' including 'meeting the competition'. Interestingly, this is the approach of Section 4 of India's Competition Act, although the CCI has repeatedly rejected a definition of dominance based only on market share, which is what Khan advocates. Her paper is part of a growing literature that questions established antitrust principles, harking back to the early years of US antitrust and calling for bringing inequality and the concentration of economic and political power back into focus. This literature has little to say about predatory pricing, so a few remarks are consigned to a footnote.<sup>21</sup>

<sup>19</sup>Strictly speaking, economic theory judges outcomes in terms of total or 'social' welfare, defined as the sum of producer and consumer surplus, with the latter taking into account variety and quality in addition to price. But this is nearly impossible to calculate in actual cases, so the consumer welfare standard is used in practice. This standard has very recently come under fire from a vocal section of the American media and legal scholars. This debate is briefly discussed below.

<sup>20</sup>Lina M. Khan, 'Amazon's Antitrust Paradox' (2017) 126(3) Yale Law Journal 710.

<sup>21</sup>See also William A. Galston and Clara Hendrickson, 'A policy at peace with itself: Antitrust remedies for our concentrated, uncompetitive economy' (*Brookings Institution Report*, 5 January 2018) <<https://www.brookings.edu/research/a-policy-at-peace-with-itself-antitrust-remedies-for-our-concentrated-uncompetitive-economy/>> accessed 22 January 2018. The title of their paper, as well as Khan's (n 20), allude to Robert Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York: Basic Books 1979), widely regarded as the foundational text of the Chicago critique. Mainstream antitrust economists are unmoved by this reopening of an apparently settled debate. Shapiro (n 1) makes a qualified case for more active antitrust enforcement while retaining consumer welfare as the guiding principle, and avoiding the trap of condemning firms for being successful or growing too big. While he agrees that concentration of political power, inequality and unemployment are very important issues, he believes that antitrust is not the right policy with which to tackle them. In earlier work, the author has shown how antitrust in most developed countries was motivated by a variety of objectives that would nowadays be regarded as non-economic, and the economic efficiency-based approach (based on maximizing social or

## 6 The Radio Taxi Wars

The author now turns to a case study of how Indian competition law has begun to get to grips with allegations of predatory pricing by platforms in a particular sector of the economy in which ICT has come to play a crucial new role. As the discussion above makes clear, ICT tools have vastly increased the power of platforms, by allowing them to reach huge numbers of users on both sides, collect the information relevant to each one's idiosyncratic demand and supply, and facilitate matching, logistics and payments. This has given rise to a new business model—taxi aggregation or ride-sharing—which has disrupted a venerable old industry. Unlike most ICT-enabled platforms, smartphones with GPS are a key additional element of this model, because real-time tracking of each other's location by taxi drivers and potential riders is crucial. The rapid penetration of smartphone usage in India, at least among the urban population, has sown the seeds of disruption.<sup>22</sup>

Traditionally, as in other countries, taxis in India were owned by individuals and could be hailed from a stand or off the road. From around 2007, a number of radio taxi companies began operating in the major Indian cities, with call centres which despatched their own taxis to riders on the basis of bookings via telephone or internet. From 2011, this business model was severely disrupted by the entry of taxi aggregators like Ola and Uber, who did not own any vehicles but only provided a platform to connect owner-drivers with potential passengers based on GPS-enabled smartphones that identified their locations. The aggregators' algorithms set the fares for each trip, and unlike tariffs for traditional taxis, these could be calibrated in real time to reflect the supply/demand balance for rides. In 2015, Meru, one of the more successful radio taxi operators whose business had been badly affected, filed separate cases with the CCI, alleging that Uber in Delhi and Kolkata, and ANI Technologies (owners of the Ola brand) in Bengaluru, were engaged in predatory pricing. Another radio taxi operator, Mega Cabs, filed a similar case against ANI in regard to the Delhi market, as

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consumer surplus) is of relatively recent vintage. Author suggested that competition policy in developing countries could address distributional issues by competition agencies initiating more vigorous *suo moto* inquiries into markets for goods and services consumed by the poor, instead of allowing their dockets to be swamped by clashes between corporate giants. See generally, Aditya Bhattacharjea, 'Who Needs Antitrust?: Or, Is Developing-Country Antitrust Different? A Historical-Comparative Analysis' in Daniel Sokol, Thomas K. Cheng and Ioannis Lianos (eds), *Competition Law and Development* (Stanford University Press 2013).

<sup>22</sup>India's smartphone revolution is impacting many other industries. See generally, Hemant K. Bhargava, David S. Evans and Deepa Mani, 'The Move to Smart Mobile and Its Implications for Antitrust Analysis of Online Markets' (2016) 16 UC Davis Business Law Journal 157. The authors forcefully argue that antitrust principles developed for static markets are inapplicable to such rapidly evolving markets.

did three individual auto-rickshaw drivers. (Ola also provided aggregation services for auto-rickshaws.)<sup>23</sup> The author summarize below the essential features of these cases.

In all five cases, the informants claimed that the ‘Opposite Parties’ (Ola or Uber) were dominant because each had within a few years captured over 50% of the relevant market. Allegedly, this was because they were backed by vast amounts of venture capital and private equity funding that enabled them to run their services at a loss, offering very low fares to passengers and multiple incentives to drivers.<sup>24</sup> There were disputes over the exact definition of the relevant markets and the reliability of the market share data submitted by the informants, but the outcome of the cases did not depend on these issues. In every case, the CCI found that there was adequate evidence of vigorous competition between Ola and Uber, with several other radio taxi services also present in each market. Evidence of fluctuating market shares showed that ‘the competitive landscape in the relevant market is quite vibrant and dynamic’.<sup>25</sup> Thus no case of dominance was made out, and the CCI did not have to make a determination on the question of predatory pricing, although on that point Uber had been up front about network effects, claiming that its price reduction was ‘not to indulge in unhealthy competition but to bring more and more cabs and customers to its network and to increase the value of the network’.<sup>26</sup> In the slightly different case initiated by the Delhi auto-rickshaw drivers, their counsel argued that the relevant product market included all ‘paratransit services’ including traditional taxis and auto-rickshaws. But the CCI held that ‘owing to the difference in comfort, time taken ... buying power of the consumer (rider) etc.’,<sup>27</sup> auto-rickshaws operated in a different product market as compared to radio taxis, and less than 20% of Delhi’s auto-rickshaws operated on the Ola network. Therefore, here again Ola was not dominant. (Uber was not present in the auto-rickshaw segment.)

<sup>23</sup>*Meru Travel Solutions Pvt Ltd (MTSPL) v Uber India Systems Pvt Ltd* (2015) Competition Commission of India, Case No. 81 of 2015, order dated 22 December 2015 (Kolkata); *Mega Cabs Pvt Ltd v ANI Technologies Pvt Ltd* (2015) Competition Commission of India, Case No. 82 of 2015, order dated 9 February 2016; *Meru Travel Solutions Pvt Ltd v Uber India Systems Pvt Ltd and Others* (2015) Competition Commission of India, Case No. 96 of 2015, order dated 10 February 2016; *Mr Vilakshan Kumar Yadav and Ors. v ANI Technologies Pvt Ltd* (2016) Competition Commission of India, Case No. 21 of 2016, order dated 31 August 2016 (all three Delhi); *Fast Track Call Pvt Ltd and Meru Travel Solutions Pvt Ltd v ANI Technologies Pvt Ltd* Competition Commission of India, Case No. 21 of 2016, Cases No 6 and 74 of 2015, order dated 19 July 2017 (both Bengaluru; another radio taxi company, Fast Track, had separately submitted information against ANI/Ola. Finding similar allegations in both cases, the Commission clubbed them for investigation and disposal).

<sup>24</sup>Although the bulk of Khan’s paper is taken up by her documentation of Amazon’s behavior, Uber is also mentioned (Khan (n 20) 786–787), as following a similar predatory strategy, with sustained heavy losses financed by investors.

<sup>25</sup>*Meru Travel Solutions Private Limited* (Case No. 96) (n 23), para 24.

<sup>26</sup>ibid 15, emphasis added.

<sup>27</sup>*Mr Vilakshan Kumar Yadav and Ors.* (n 23), para 14.

In one of the Delhi cases, Meru appealed to the Competition Appellate Tribunal (COMPAT), which disagreed with the CCI's narrow definition of the relevant geographical market. It pointed out inconsistencies in the CCI's reliance on the market share data given in different survey reports. It also held that under Section 19(4), dominance should not be established based on market share alone, but the high market shares ascribed to Uber in the survey report submitted by Meru could not be ignored. Regarding pricing, it remained agnostic:

Aggregator-based radio taxi service is a relatively new paradigm of public transport in Indian cities.... Reportedly, it has done wonders to consumer satisfaction in whichever city it has started. Therefore, it cannot be said definitively that there is an abuse inherent in the business practices adopted by operator such as respondents [Uber,] but the size of discounts and incentives show that there are either phenomenal efficiency improvements, which are replacing existing business models with the new business models or there could be an anticompetitive stance to it.<sup>28</sup>

COMPAT reopened the case, ordering an investigation by the Director General (DG) of the CCI. But Uber immediately appealed to the Supreme Court, on the grounds that COMPAT could only order an investigation if it found a *prima facie* case against Uber, and that no such case could be made out because Uber was not dominant in the relevant market. In January 2017, the Supreme Court restrained the CCI from carrying out the investigation until further orders. Further hearings took place in March 2017, but no further developments in this case have been reported up till the time (January 2018) that this chapter was completed.

In four of the five cases reviewed here, the CCI found no dominance and hence no *prima facie* case and closed the matter without ordering an inquiry by its DG. The author would like to summarize at somewhat greater length the fifth case, in which Meru and Ola faced off with regard to the Bengaluru market. Even though its final decision was ultimately the same as in the other four cases, in this instance the CCI did find a *prima facie* case of abuse, ordered a DG investigation, considered more arguments going beyond market shares, and also discussed the economics of platform competition and the issue of unequal access to financial markets.<sup>29</sup> Presumably, if the Supreme Court allows the investigation in *Meru v Uber* to proceed, that case will follow a similar trajectory to *Meru v Ola*.

In *Meru v Ola*, the CCI accepted the contention of the informants that the relevant market was the market for radio taxi services in Bengaluru. It rejected Ola's argument that it was not a taxi service provider, but only a technology software service provider or aggregator, enabling taxi drivers to connect with potential passengers and facilitating payments. Notwithstanding that Ola, unlike the rival radio taxi services, did not own the taxis that operated on its platform, it did fix their prices and offer their services, which consumers treated as functionally

<sup>28</sup>*Meru Travel Solutions Pvt Ltd v Competition Commission of India, Uber India Systems Pvt Ltd & Ors* (2016) Appeal No. 21/2016, order dated 7 December 2016, para 18.

<sup>29</sup>*Fast Track Call Pvt Ltd and Meru Travel Solutions Pvt Ltd* (n 23).

substitutable with those of the rival operators. Regulatory authorities also treated aggregators as radio taxi service providers. The CCI concluded that having a different business model did not imply that Ola operated in a different market.

The bulk of the CCI's analysis dealt with the question of whether Ola was dominant in the market thus defined. The fleet sizes registered by the different platforms were not appropriate for market share calculations, since taxi owners could register with different platforms; instead the number of trips was taken as the relevant indicator. Four years after it commenced its Bengaluru operations in 2011, Ola's share of the number of taxi trips exceeded 60%, which according to the informants created a presumption of dominance. Conversely, Meru's share fell from 60 to 6–7%, and the other traditional companies were driven down to even less. But the CCI refused to accept this as evidence of Ola's dominance. It pointed out that market share was only one of the indicators provided in the Act for assessing dominance, and in new high-tech industries high market shares could be ephemeral. The CCI highlighted the fact that Uber, which entered in 2013, had acquired a share of nearly a third by 2015, providing effective competition to Ola, whose share actually dipped. The erosion of the older operators' shares was 'more attributable to the expansion of the consumer base in the market than them being deprived of the demand which they were serving before'.<sup>30</sup> All but one of the older operators had in fact witnessed an absolute increase in the number of trips.

The CCI then gave a nice summary of the economics of network effects in two-sided platforms<sup>31</sup>, but it did not agree with the informants that these constituted barriers to entry. It pointed out that the network effects had not been strong enough to deter the entry and rapid expansion of Uber. It also pointed out that both drivers and riders could multi-home, switching easily between Ola and Uber. This 'constrains the power of the platforms to act independently of the market forces'.<sup>32</sup> Entry conditions for platforms were also more favourable than for traditional taxi services, because platforms did not need to invest in large fleets of vehicles. The CCI also disagreed with the informants that Ola's access to huge finances from foreign venture funds constituted an entry barrier. It pointed out that many start-ups in various high-tech sectors with network effects had attracted financing. New business models and technologies were rapidly displacing older ones.

The CCI refused to be swayed by the informants citing of its order in *MCX v NSE*, in which it had suggested that predatory pricing itself could evidence of dominance. It referred approvingly to the holistic approach of the Act, which did not allow for a firm's conduct to be accepted as evidence of dominance in the absence of other factors. The informants had also argued that the absence of further entry after Uber indicated lack of competition, but the CCI did not agree. It emphasized that competition analysis required assessment of the competitive

<sup>30</sup>ibid, para 81.

<sup>31</sup>ibid, paras 89–92.

<sup>32</sup>ibid, para 94.

process, not a count of the number of firms. A table of average monthly margins over the period of investigations showed that it was Uber that had initiated the strategy of pricing below costs, with Ola following nine months later. Finally, the CCI made short work of the informant's argument that Ola and Uber could be held to be jointly dominant. Apart from citing the language of the Act itself, the CCI pointed out that in 2012, an amending Bill had been tabled in the Lok Sabha (Lower House of Parliament) in order to introduce the concept of joint dominance, thereby showing that Parliament was aware that it was absent in the Act. The Bill lapsed when the Lok Sabha was dissolved in 2014 before it could be passed.

The CCI's conclusions on dominance deserve to be reproduced in full:

In conclusion, based on collective consideration of the facts that the competitive process in the relevant market is unfolding, market is growing rapidly, effective entry has taken place thereby leading to gradual decline in [Ola's] market share, entry barriers are not insurmountable, there exist countervailing market forces that constrain the behaviour of OP and the nature of competition in dynamic, innovation-driven markets, the Commission is of the considered view that [Ola's] dominance in the relevant market remains unsubstantiated.<sup>33</sup>

Since in the CCI's jurisprudence, establishing dominance has been (in most cases) a hurdle that has to be crossed before addressing the allegation of predatory pricing, this conclusion was sufficient to dispose of the case against Ola. But the CCI nonetheless devoted the last few paragraphs of its order to a brief discussion of pricing strategy. It was clearly impressed by the 1900% increase in radio taxi trips during the 40-month period of investigation, attributing it not only to the reduction in transaction costs made possible by the platform technology, but also the 'abyssmally low prices' of Ola and Uber which had 'revolutionised the taxi market'.<sup>34</sup> Significantly, it acknowledged that

[T]he Commission does not fully disagree with the Informants that the low prices of [Ola] are not because of cost efficiency, but because of the funding it has received from the private equity funds. But as discussed above, there is no evidence that the access to such funding was inequitable and that the market for financing was not competitive and had aberrations. Moreover, it was their penetrative pricing strategy that facilitated them to garner high market shares in short span of time as well as develop the networks to a size that could provide sufficient positive externalities to the participants of the network.<sup>35</sup>

The CCI concluded that 'it is difficult to determine with certainty the long-term impact of this pricing strategy as the market is yet to mature', and expressed its reluctance 'to interfere in a market which is yet to fully evolve'. In any case, there was a 'statutory compulsion of non-intervention' because dominance could not be established.<sup>36</sup>

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<sup>33</sup>ibid, para 105.

<sup>34</sup>ibid, para 121.

<sup>35</sup>ibid, para 122.

<sup>36</sup>ibid, para 123.

This order of the CCI in *Meru v Ola* may be appealed, as was the order in *Meru v Uber*, which resulted in COMPAT'S directive to investigate the issue of dominance. However, the taxi wars entered a new phase in October 2017 when Meru initiated a fresh round of litigation before the CCI by alleging that acquisition of large equity stakes in both Ola and Uber by SoftBank would affect their pricing decisions jointly. This raises multiple possibilities. The common shareholder could be seen to facilitate a horizontal agreement or understanding on price-fixing, which would be presumptively illegal under Section 3(3) of the Act. Or, if it could be established that SoftBank's shareholding is sufficient for it to exercise control over both the firms, then they could be a 'group' as defined in the Act. This would allow Meru to cross the hurdle of establishing their joint dominance in the relevant markets, clearing the path to an inquiry into an exclusionary pricing strategy under Section 4. Even if no such common understanding or control can be established, if either Ola or Uber is individually found to be dominant in one of the metros after a fresh investigation, the question of SoftBank's liability for the conduct of its portfolio firms might arise.<sup>37</sup>

Meanwhile, the two giants, Ola and Uber, continue to slug it out, incurring heavy losses, being kept afloat only by periodic infusions of venture capital. Presumably, armed with the huge amount of data they have gathered on individuals' commuting patterns, the promoters of each one (and their investors) have worked out the pricing structure that they would implement if the other one gives up and exits, and on that basis have calculated that they will be able to recoup their losses. While the CCI is not required to establish recoupment, it will have to look into price-cost margins. How will it distinguish between 'phenomenal efficiency improvements' and anticompetitive behaviour, both of which the COMPAT allowed for a while ordering the investigation? While prices can be inferred from reported revenues, the AVC for such operators would have to be constructed from data on commissions and incentives given to drivers. What the equilibrium monopoly pricing structure might be, and whether consumers would be worse off if only one aggregator is left standing, is probably beyond any antitrust agency's ability to predict. How far the CCI can venture in such cases is also open to question, given that Section 4 of the Competition Act does not require an assessment of effects on competition. But these issues will arise only if the Supreme Court allows the investigation into Uber's dominance to proceed, and the CCI either finds Uber to be dominant or is persuaded by the new arguments based on common shareholding. Meanwhile, the COMPAT has been wound up, and all appeals will now go the overburdened National Company Law Appellate Tribunal, which has no experience in competition matters, and then to the Supreme Court. Resolution of these issues seems a long way off, by which time technologies, business models, and commuting habits of the public may have changed significantly.

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<sup>37</sup>For a discussion of the antitrust analysis of the role of common shareholding in anticompetitive practices of portfolio firms (written before SoftBank invested in Uber), see Smriti Parsheera, Ajay Shah and Avirup Bose, 'Competition Issues in India's Online Economy' (2017) National Institute of Public Finance and Policy Working Paper No. 194 <[http://www.nipfp.org.in/media/medialibrary/2017/04/WP\\_2017\\_194.pdf](http://www.nipfp.org.in/media/medialibrary/2017/04/WP_2017_194.pdf)>.

## 7 Conclusion

The economic analysis of predatory pricing has gone through several phases. If the Chicago critique cast doubt on the very rationality of such a strategy, then the game-theoretic counter-critique rehabilitated it theoretically but gave few practical insights into how to identify it in real-world cases. The newer literature on platform competition has further muddied these waters, showing that there is no simple way to prove predatory pricing, much less to condemn it. Indian competition jurisprudence, having gone completely off the rails in the MRTP era, is now cautiously trying to deal with some of these issues in the ongoing legal battles between old and new model radio taxi operators.

It is difficult at this stage to provide any general principles on how to proceed in such cases.<sup>38</sup> What emerges from the successive doctrinal phases in antitrust thinking that the author surveyed above is that assessment of predatory pricing in platform competition is very complicated and should be conducted case by case, taking into account both positive and negative effects which may differ from industry to industry. This requires what is called the ‘rule of reason’ in antitrust jurisprudence. Such an approach requires careful fact-finding and analysis. But given the rapidly unfolding dynamics of platforms, the complexity of arguments on both sides, and the ability of such firms to withhold data and hire top lawyers to delay proceedings, the damage may be done and the platform fully entrenched before the case is decided. On the other hand, early intervention by a competition agency could prematurely kill off a promising new business model which might eventually prove beneficial for society. Unleashing the agency’s weapon of the last resort, the power to break up a dominant firm, would be self-defeating: as the *Economist* put it recently, ‘a full-scale break-up would cripple the platforms’ economies of scale, worsening the service they offer consumers. And even then, one of the Googlettes or Facebabies would eventually sweep all before it as the inexorable logic of network effects reasserted itself.<sup>39</sup>

## Postscript

As the final proofs of this chapter were being reviewed, the CCI pronounced a combined order disposing of four very similar ‘informations’ filed by Meru against Ola and Uber regarding their conduct in Hyderabad, Chennai, Mumbai and Kolkata (Cases 25-28 of 2017, order dated 20 June 2018). Meru repeated many of the arguments it had advanced in the cases discussed above in Part 6, and the

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<sup>38</sup>Parsheera, Shah and Bose (n 37) gave some interesting suggestions on how the CCI should deal with competition issues in network markets, but the author does not think they can be accommodated within the scheme of the Competition Act.

<sup>39</sup>‘Taming the Titans’ *The Economist* (20–26 January 2018) 11.

Commission rejected them on the same grounds as before. But, as mentioned on page 228 above, Meru also advanced the new argument that Ola and Uber are now dominant as a group because common investors like SoftBank own shares in both companies. The CCI's order acknowledged that both academics and competition authorities have recently assessed various 'theories of harm' that could arise out of common ownership, but the theoretical and empirical literature does not give any grounds for concluding that such ownership would always have an anticompetitive effect. Even if Ola and Uber could be held to be dominant as a group on the basis of common ownership, the Commission pointed out that there was inadequate evidence of abuse of dominance. Therefore, it held that the facts do not at present establish a *prima facie* case of violation of the Competition Act, and closed the case. However, it warned that it would keep a close eye on the firms, and take action if common ownership results in anticompetitive effects in future. Network effects and platform competition did not figure significantly in this order.

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# **Chapter 12**

## **Competition Law and Standard Essential Patent (SEP) in India: A Few Critical Issues to Ponder**



**Geeta Gouri**

### **1 Introduction**

Several cases pertaining to standard essential patents (SEPs) and fair, reasonable, and non-discriminatory (FRAND) commitments have been filed before the Competition Commission of India (CCI). These cases pertain to well established technology companies that granted SEPs for their innovations in the telecommunications sector. As is to be expected, the allegations are mainly from smart phones manufacturers or assemblers. The parties have alleged in their representation to the Commission that SEP owners in the telecommunication sector have violated FRAND commitments of 'fair, reasonable and transparent' in the terms offered to licensees. Royalties in their opinion are high and discriminatory indicative of abuse by dominance in the technology of GSM, 2G, 3G and other expanding segments of the sector. Injunctions have also been sought from the High Court of Delhi as regards to royalty base and methodology including royalty stacking of SEPs suggesting hold-up by patent owners.

In India, these are the first cases pertaining to SEPs. Most competition jurisdictions which now include China and South Korea do not consider violations pertaining to SEP are in the domain of antitrust authorities. Accepting the argument that Intellectual Property Rights (IPRs) can create dominance they have opined that extending the liability referenced to standard antitrust arguments is inappropriate and self-defeating impacting technological development and consumer benefits. Concerns have however, been voiced on whether by including several Intellectual Properties (IPs) into a single portfolio there is possibility of monopolization and of unilateral action more so with the emergence of Patent Assertion Entities (PAEs) or of trolls. The literature on FRAND and SEPs however, all point to settlement of issues in court of law rather than as an antitrust issue. It raises the fundamental

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question as to why CCI directed investigation by the Director General (DG) in what is widely accepted as the domain of the courts and not an antitrust issue.

The decision of the Delhi High Court permitting the Commission to resume its investigation on the allegation of dominance and its abuse adds further substance to the question raised. In this chapter an attempt is made to examine the concerns of the Commission for initiating investigation and whether the unease of the Commission can be justified. It is significant that all cases pertaining to SEPs have been considered in the framework of Section 4 (Abuse of Dominance) in terms of their anticompetitive effects and not with reference to Section 3(4) which deals with agreements and Section 3(5) which deals with agreements protected under IPRs. This penchant for Section 4 raises several questions as the entry point for antitrust investigation. Does the textured rigidity and static arguments of the Section make it easier for the Commission in its assessment of anticompetitive effects? Or persuaded perhaps ironically, by the perception of informants of Commissions proclivity for the Section. The presumption is that SEP owners are dominant and therefore immune to competitive constraints. The author is of the opinion that the presumption and choice of the appropriate section while interlinked, suggests a 'per se' approach to competition law and SEP in India.

The author ventures further to fathom that the decision of the Delhi High Court suggests that it was an attempt on the part of judiciary to endorse a reasoned economic analysis of IP, SEP and FRAND in dynamic markets of innovation by an expert body. The Commission is yet to develop a reasoned approach and jurisprudence towards IPR. In absence of guidelines dealing with IP and with a track record of conservative judgements, it is imperative that instead of extending liability under uncertain circumstances an objective discussion may be initiated based on logic and reasoning.

This chapter examines the two basic but interlinked questions: Are SEPs *prima facie* dominant and whether dominance leads to a per se inference of abuse? The chapter is divided into two parts to address the two questions separately.

## 2 Dominance and Standard Essential Patents

The number of cases filed before the Commission on patents in the telecommunications sector and SEPs are about half dozen pertaining to abuse of dominance.<sup>1</sup> Allegations in all the cases pertained to abuses of dominance under Section 4 of the

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<sup>1</sup>M/s ESYS Information Technologies Private Limited v Intel Corporation (2011) Competition Commission of India, Case 48/2011; Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (Publ) (2013) Competition Commission of India, Case 50/2013; Intex Technologies (India) Limited v Telefonaktiebolaget LM Ericsson (Publ) (2013) Competition Commission of India, Case 76/2013; M/s Three D Integrated Solutions Ltd. v M/s VeriFone India Sales Pvt. Ltd. (2013) Competition Commission of India, Case 13/2013; M/s Atos Worldline India Pvt. Ltd. v M/s Verifone India Sales Pvt. Ltd. (2012) Competition Commission of India, Case 56/2012; M/s

Act on the premise that SEP owners are dominant in the relevant market. The *prima facie Order* in the case *Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (Publ)* identifies dominance as central to the allegation to be addressed: ‘From the perusal of the information and the documents filed by the Informant *prima facie* it is apparent that Ericsson is dominant in the relevant market of GSM and CDMA....’

Further, an explanatory phrase in the next paragraph: ‘The allegations made in the information and not refuted by OP concerning royalty rates sums up the initial responses of the Commission.’

*Prima facie Orders* are important although not in the same league as the Order after the investigation. A pre-investigation Order has less weightage. It indicates the mind of the Commission based on information available in public domain and what is filed by the parties. The investigations generally follow the line of thinking of the *prima facie Order*. It strengthens the initial presumption rather than pose counterfactuals or alternate lines of reasoning. There have been dissenting *prima facie Orders* too, but Members largely prefer to evaluate their decision on receiving the investigation Report of the DG. The Commission also has a policy: (i) to call for more information from the informant and the deponent and (ii) to provide for initial hearing of the arguments. The information filed can therefore be refuted at the early stages to which due weight is given by the Commission. In the SEP cases, decisions made based on similar information tend to carry weight in subsequent *prima facie Order*.<sup>2</sup>

It needs however, to be emphasized that a *prima facie Order* does not necessarily suggest thinking of the Commission but merely voices concerns on the possibility of dominance and the scope for abuse. For instance, in *Micromax Informatics Limited v Telefonaktiebolaget LM Ericsson (Publ) (Ericsson)* the market so defined (GSM and CDMA) suggested dominance of the enterprise indicative of indulgence in anticompetitive activities that call for further investigation. At the outset let us examine as to whether SEPs are necessarily dominant in the relevant market as alleged in an assertion that devolves on a ‘per se’ understanding based on a static traditional approach of economics of competition law that patents provide a monopoly right. This approach raises several uncomfortable questions in the telecommunications sector, the sector itself is no longer confined to the lines and wires networks and related equipment has expanded to include internet services, digital transmission of voice and data, cloud computing, internet of things and requisite technology accessed by consumers.

Firstly, a monopoly right and the scope afforded for earning monopoly profit while an incentive for existing patent owners is also the incentive for aspiring innovators. It is also debatable whether monopoly profits are sufficiently conducive

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*Best IT World (India) Private Limited (iBall) v M/s Telefonaktiebolaget L M Ericsson (Publ)* (2015) Competition Commission of India, Case 04/2015.

<sup>2</sup>ibid.

for further innovation and degenerate to the general advantage of patent as an entry barrier. The counter to this argument is that patents are awarded only to new innovations that are original and patentees have to prove that it is not mere imitation or improvisation at the most. The scope for innovation and the time cycle of innovation differs among industries. Studies and evidence have shown that in the telecommunications sector the speed of innovation has been remarkably fast.

Secondly, the telecommunications sector and its convergence with the internet and artificial intelligence has seen two developments: (i) a wide range of alternatives to the GSM/CDMA technologies and (ii) combining of different innovations enabling different functions in a mobile and of course, the emergence of apps.

Technological developments redefine markets spaces and dominance which have not been taken into account in the *prima facie* Orders. Orders uniformly state that as SEP owners in the telecommunications sector, the firm is but dominant. The same arguments have been applied in other cases also, for instance, *Intel* in the microprocessor segment.

The Order notes that in the market for GSM and CDMA technology in India, Ericsson<sup>3</sup> is dominant. Globally the market share of Ericsson was estimated at 35%. In India as the Order points out the company holds 30,000 patents of which 400 patents have been granted in India.<sup>4</sup> The Order opines that since the firm holds an SEP, it is an indication that there is no alternate technology in the market. This is indicative of market power and dominance. The same argument continues in later Orders.<sup>5</sup> In the case of Intel and microprocessors (chips) the Commission found the firm in a dominant position in three of the four defined markets.<sup>6</sup>

Market data shows that towards the end of 1990s, 85% of the GSM market consisted of five players—Ericsson, Nokia, Siemens, Motorola and Alcatel.<sup>7</sup> Major SEP owners with licensing programs includes Lucent, Ericsson, Nokia, Interdigital and Qualcomm.

The data on market share clearly points to two facts. Firstly, the telecommunications sector is highly innovative with ever expanding horizons of the internet from 2G to LTE to Cloud computing. As a lucrative market, entry of new firms with competing and often disruptive technology is the hall mark of technology based markets. Dominance at best is a temporary phenomena subject to the threatening presence of competitive constraints. As is argued later the presence of competitive constraints restricts the ability of a SEP owner to charge exorbitant royalty fees. The

<sup>3</sup>ibid.

<sup>4</sup>*Micromax* (n 1).

<sup>5</sup>*Intex* (n 1).

<sup>6</sup>*M/s ESYS* (n 1).

<sup>7</sup>Claudia Tapia, Director IPR Policy, ‘DT: A New Technological and Economic Paradigm’ (Speech at the Going digital: the future of industry and jobs Workshop, Paris, 24 April 2017) <<http://www.isigrowth.eu/wp-content/uploads/2017/03/Tapia.pdf>>.

importance of looking at competitive constraints rather than dominance points to moving towards effects based analysis using rigorous economic analysis by the Commission. The argument that SEPs are dominant is powerful but not necessarily borne out by evidence.

Secondly, the need to appreciate the significance of SEP in promoting competition. Standardisation is a mechanism created by standard setting organisations (SSOs) and as the name indicates it enables the creation of a portfolio of patents that maintains standards and ensures compatibility. Several patents grouped together provide for the numerous activities that are looked for in smartphones with each generation providing for more functions. Standardization is the process where all patents are grouped together. Negotiations are simplified for a firm seeking a license. Multiple licenses are no longer required. A single license combines all patents in a set.

Thirdly, the argument that SEPs create entry barriers is not sustainable. The data shows that in the telecommunications sector, requirements of interoperability and of incorporating new features in the smartphone, the mechanism of standardization is appropriate. Standardization is a process whereby a group of patentees that combine as a package seek approval from SSOs. There are several SSOs who issue SEPs incorporating different technologies. A safe selection process of a SEP is to choose from a credible SSO such as the European Telecommunications Standard Institute (ETSI). As so much doubt has been raised on SEPs and standard setting process perhaps the Commission could consider hosting an open forum for discussion on SSOs and the process of selection before taking the final decision.<sup>8</sup>

Fourthly, the hallmark of a SEP approved portfolio of patents is that FRAND condition is voluntary and ensures that for a licensee the technology is available to all firms who agree to pay. SEP and FRAND have resulted in the proliferation of smartphones both in terms of companies manufacturing them and in the new features that are advertised as each new model is introduced in the market. The booming market for smartphones which even a partial list shows more than two dozen manufacturers<sup>9</sup> is testimony to the fact that SEPs have facilitated the growth of smart phones and telecommunication systems.

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<sup>8</sup>DoT has attempted such an open forum discussion.

<sup>9</sup>ibid; Apple, Samsung, Huawei, BlackBerry, Google, Xiaomi, Blu, Foxconn (FIH Global), LG, Pantech, Acer, ZTE, Bq, GeeksPhone, Gradiante, Positivo, DataWind, Amoi, BBK, Coolpad, Cubot, Gfive, Gionee, Haier, Hisense, Konka, Letv, Meizu, Qihoo 360, Wasam, Technology Happy Life, Ningbo Bird, Smartisan, Zopo Mobile, Lenovo, Jablotron, Verzo, Jolla, Archos, Wiko, Videocon, Groupe Bull, MobiWire, AEG, Grundig Mobile, Telefunken, Tiptel, Celkon, iBall, Intex Technologies, Karbonn Mobiles, Lava International, LYF, Micromax Informatics, Onida Electronics, Ringing Bells, Spice Digital, Xolo, YU Televentures, Nexian, Evercoss, MITO, Polytron, Advan, Brondi, NGM, Olivetti, Onda Mobile Communication, TelitKyocera Communications, NEC, Panasonic, Sansui, Sharp Corporation, Sony Mobile Communications, DoCoMo, Just5, M Dot, Ninetology, Kyoto Electronics, Lanix, Zonda, Fairphone, John's Phone, Philips, Koryolink, QMobile, Voice Mobile, Advance Telecom, TCT, Dell, Microsoft, etc.

Lastly, and of importance in an analysis of market power exerted by a dominant player is the choice available for selection of technology. Selecting a specific FRAND license being voluntary, there is no compulsion on phone manufacturers to select a particular SEP. It does however raise the question as to why the cases filed before the Commission have been on SEP and that of Ericsson. The counter arguments on this linear approach is the uncomfortable fact that all cases before the Commission are bunched in terms of time i.e. within a year suggesting a pattern of comradeship.

Discussions on SEPs and the process followed by SSOs are an important dimension of selecting a particular patent.<sup>10</sup> Credibility of an SSO is important as there are both public and private institutions including the emergent PAEs. In the present case ETSI is a well established SSO. The concern of the Commission is not on ETSI but on Clause 6 of ETSI which it is argued has been abused by Ericsson. Clause 6 as quoted by the Commission: ‘an IPR owner is required to give irrevocable written undertaking, that it is permitted to grant irrevocable license on FRAND terms, to be applied fairly and uniformly to similarly placed players.’<sup>11</sup>

In adopting a legalistic approach the Commission placed emphasis on the last phrase of ‘fairly and uniformly’ as the phrase encapsulates abuse of dominant position stated as under Section 4(2). To quote: ‘... directly or indirectly, imposes unfair or discriminatory conditions in purchase or sale... ...or in the price of purchase or sale of a good or service.’ Taking recourse to Clause 6 the Order suggests that owners of SEP are not in conformity with ‘fair, reasonable, and non-discriminatory’ in making royalty claims. Interpretation of the phrase is open to multiple interpretations.<sup>12</sup> Reference to Clause 6 and the allegations in the Orders necessitates an examination of ‘fair, reasonable, and non-discriminatory’ royalty payments.

Recent provocation by the Indian Cellular Association to mobile manufacturers to calibrate their allegations against SEP owners on royalty payments and the non-disclosure agreement cite violation of ‘fair and reasonable’ condition of FRAND. Claims of royalty claimed as excessive and inappropriate in terms of methodology suggests attempts to persuade the Government to declare SEPs as ‘non-essential’ placing it outside the framework of essential and standard, in a misplaced understanding of ‘essential’ in SEP. It is also a move that will hit the growth of smartphone manufacturers and the emergence of strong IPR standards within the country.<sup>13</sup>

<sup>10</sup>Ankita Tyagi and Sheetal Chopra, ‘Standard Essential Patents (SEP’s)—Issues & Challenges in Developing Economies’ (2017) 22(3) Journal of Intellectual Property Rights 121.

<sup>11</sup>ibid; *Micromax* (n 1).

<sup>12</sup>ibid; The most narrow limited interpretation is if a legalese approach is followed as in the *MCX Stock Exchange Ltd v National Stock Exchange of India Ltd* (2009) Competition Commission of India, Case 13/2009. Or more expansive and sound in terms of economic theory is possible with an effects-based approach as in the recent decision on Ola and Uber cabs.

<sup>13</sup>‘Handset firms trying to avoid paying royalty worrying’ *The Financial Express* (12 March 2016).

Does dominance lead to abuse seen in terms of royalty conditions? What is ‘fair and reasonable’ always provokes different responses. Interestingly arguments often made before the Commission not only in cases of SEP but across all cases of abuses relating to pricing clearly demonstrated an effort to define fair and reasonable from the perception of the informant and of uniformity irrespective of differences in the nature and characteristic of the product or on whether each price is a negotiated transacted amount. In this part the author will only emphasize upon few fallacies and misconceptions on pricing and royalty payments that have bothered her and calls for deeper analysis.<sup>14</sup>

The commonplace interpretation of ‘fair and reasonable’ argued as uniform royalty for all licensees tends to ignore the critical point that a license is a negotiated document between two parties defined by what is offered and what is sought. A price so negotiated is fair and reasonable disputed on grounds that a SEP owner is dominant and the agreement is not fair as it is between two unequal parties. There are several loopholes in the argument of unequal bargaining strength with shades of populism. Firstly, firms manufacturing handsets are not exactly small. As per the information filed by one of the informants Micromax, by its own admission is the 12th largest handset manufacturer in the world.<sup>15</sup> Between a large domestic manufacturer and a large international SEP owner the situation is more akin to competing dominance than of unequal status at least in the Indian mobile and handset market. The issue devolves on who needs whom. Is it the patent owner or is it the patentee? Data on SEP technology for telecommunications showed several players vying for the market. The prevalence of competitive constraints balances the relationship in a negotiated settlement. Patent owners seek markets and generate funds by selling their patents. These funds cover investment in R&D vital to product development and innovation. To argue that a common (uniform) royalty rate be applicable to all seeking license is not a valid argument. Secondly, a competitive price is the rate at which a consumer satisfaction or marginal utility is met. It defines the value of a product (patent in this case) to the person seeking a license. Process of negotiation and the price settled reflects the value of the license in terms of the price fixed. There are different features that a phone incorporates and the choice of a specific patent is defined by the features that a phone manufacturer wishes to incorporate. Prevalence of competitive markets at the SEP technology and in the market for smartphones and other communication devices make for complexity of negotiations and royalty payments. To prove that royalty rates are reasonable and fair requires comparisons to be product specific, feature specific and

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<sup>14</sup>The author has not gone into the arguments on the welfare aspects of price discrimination as set out in the Second theorem. As regards patents the word ‘differential’ is preferred to discrimination to avoid any pejorative connotation.

<sup>15</sup>ibid.

time specific, provoking the question, how is the market to be defined—technology, implementer and consumer? And then to examine the strength of each market(s) in providing the requisite competitive constraint.

A negotiated settlement normally involves the rights of two parties but in the case of smartphones and telecommunication equipment the rights of consumer have to be considered by antitrust authorities. The rights of a patent owner to his IP and the incentive to keep innovating as against the right of the patentee or implementer whose right stated in the *prima facie* Order is assured under Clause 6 of the ETSI.<sup>16</sup> The Order points out that the patent owner has to grant irrevocable license to the following extent: ‘Manufacture, including the right to make or have made customized component and sub-systems to the licensee’s own design for use in manufacture, sell, lease, or otherwise dispose equipment so manufactured; repair, use or operate equipment’s; and use methods’.

Issuing of SEP licenses on FRAND terms enables the gains to be used by the implementer to benefit the consumer. Competition authorities concern should be with the consumers and not the implementers. Benefits of technology flows through the chain. How does one view the dynamic benefits of technology? How does one give a patent holder the right to his innovation? As stated in the Preamble of the Act, competition is to protect consumers. The argument put forth by Micromax and Intex in their filings with the Commission that consumers lose out on account of high royalty payments which result in higher costs is simplistic and tends to be an ‘accounts based approach’ towards pricing rather than an ‘economics based approach’ to pricing. The former is a methodology commonly used in cost based pricing schemes where all inputs plus a reasonable rate is added to arrive at a reasonable price. The arguments against royalty as a percentage of final selling price and for royalty pricing on the smallest saleable patent practicing component (SSPPC) proceeds on this logic and designated as ‘discriminatory’.<sup>17</sup> The argument that royalty rates affect the final price resulting in consumer harm is based on simplistic concept of pancaking of costs to arrive at the final costs. In a competitive market, prices of handsets and of smartphones are based on several factors—such as elasticity of demand; number of firms and availability of substitutes; business strategies that different firms adopt to increase sales etc. notwithstanding that royalty payments where SEP is concerned would impact in the same manner for all telecommunication equipment manufacturers.<sup>18</sup>

It still leaves the question as to why the Order considered that charging of relevant fee on the total sale price was exorbitant and instead suggested royalty to be paid on the patented product or what is known as the SSPPC as the royalty base to determine a FRAND royalty. While arguments have been put forward for SSPPC it goes against the logic of standardization process. In fact, payment of royalty for

<sup>16</sup>ibid.

<sup>17</sup>The example cited in the Orders is that the royalty would be ₹1.25 in a phone costing ₹100. On a phone costing ₹1000 the royalty would be ₹12.5.

<sup>18</sup>Prices of smartphones and handsets have been falling as also that of mobile subscription.

each patent may result in a larger amount of royalty paid out and misses out on the importance of the basic intention of FRAND which is to determine a value of the entire portfolio.<sup>19</sup>

Primarily and most importantly, there are several inputs and complementary products that are part of a mobile. In a standard they are all part of a package where the royalty payment is for the package. All of them have been harmonized to complement each other leading to what is commonly known as network effects. The standards setting process of SSO coordinate the process of a SEP. The value of a single license is enhanced by all the complementary features. They can only function if interoperable. Networks create value and fixing royalty as a percent of the final price is to price the patent at the value consumers' perceive when they buy the product at a given price.<sup>20</sup>

The recent Delhi HC judgement has brought to the forefront network economies and payment of royalty on the basis of total value associated with interoperability and complementarity of telecommunications systems rather than on the value of a single license. The court also noted that this was the method of fixing the base for royalty world over including US and China. The court also confirmed uniformity of approach after examining several licenses.<sup>21</sup> The importance of these developments to the benefit of consumers (primarily achieved through network effects of compatibility) was highlighted. The essence of FRAND royalty is of network economies.<sup>22</sup>

The Commission in examining cases of ‘abuse of dominance’ prefers the ‘form-based approach’ rather than ‘effects-based approach’.<sup>23</sup> An ‘effects based approach’ would necessarily have to take into consideration the dynamics of market pricing as also the relevance of network economies. The concept of network economies did not find much favor during the *prima facie* Orders. In *MCX-SX v NSE*, network economies and the gains to consumers were overshadowed by

<sup>19</sup> An appropriate way to determine a FRAND royalty is to determine a benchmark rate which is governed by the value of the patentee's portfolio'; *Unwired Planet v Huawei* [2017] EWHC 711.

<sup>20</sup> As a point of reference, cases on FRAND dispute in the US courts use the term ‘price differentiation’ and not ‘discrimination’ thereby removing the pejorative connotation of the term.

<sup>21</sup> J. Gregory Sidak, ‘FRAND in India: The Delhi High Court’s Emerging Jurisprudence on Royalties for Standard Essential Patents’ (2015) 10(8) *Journal of Intellectual Property Law & Practice* 609.

<sup>22</sup> J. Gregory Sidak, ‘The Meaning of FRAND, Part I: Royalties’ (2013) 9(4) *Journal of Competition Law & Economics* 931; J. Gregory Sidak, ‘The Proper Royalty Base for Patent Damages’ (2014) 10(4) *Journal of Competition Law & Economics* 989; J. Gregory Sidak, ‘The Meaning of FRAND, Part II: Injunctions’ (2015) 11(1) *Journal of Competition Law & Economics* 201.

<sup>23</sup> Shift to an effects based approach is discernible in some of the recent orders of the Commission such as *XYZ v REC Power Distribution Company Ltd.* (2014) Competition Commission of India, Case 33/2014; *Bharti Airtel Limited v Reliance Industries Limited* (2017) Competition Commission of India, Case 03/2017; *Fast Track Call Cab Pvt. Ltd v ANI Technologies Pvt. Ltd.* (2015) Competition Commission of India, Case 6 & 74/201; as compared to the attempts to use effects based analysis as in the Minority Order of *MCX* (n 12).

concerns of predatory pricing and leveraging of a ‘dominant’ stock exchange. The prism of static analysis saw the Majority Order emphasizing in this case the importance of protecting competitors rather than competition.<sup>24</sup>

### 3 Abuse of Dominance

Proceeding on the basis that SEP owners are dominant, the Order directed the DG to proceed with investigations within the framework of Section 4 ‘Abuse of Dominance’. The tempting dimension of the Section is the scope afforded for a ‘per se’ acceptance of abuse once dominance is established. In a form based approach the guiding factor in Section 4 of the Act is the word ‘shall’ in the phrase ‘No enterprise or group shall assume its dominant position’ enabling conditions for a ‘per se’ decision.<sup>25</sup> Section 19(4) which lists out conditions of dominance provides little legal comfort for an alternate understanding of dominance except for general clause (m) ‘any other factor which the Commission may consider relevant for the enquiry’.<sup>26</sup> The approach is inadequate in cases involving IPRs and patents for SEPs in the telecommunications sector primarily on account of limited dominance, at the most is a temporary phenomenon as noted in the previous part. Given the rapidity of technological change it was also pointed out that there are several SEPs and SSOs. Any dominance is subject to competitive constraints. An ‘effects based’ approach is required but the temptation of resorting to a ‘form based’ approach is often too strong.

An ‘effects-based’ approach persuades investigation to define the market appropriately and in doing so be able to identify competitive constraints. An innovative Small but Significant Non-transitory Increase in Prices (SNNIP) test that looks at alternate technologies and alternate features that can be included in a smart phone can be considered. In defining the market with or without the SNNIP test several outcomes can be envisaged. Identify the number of SEPs and SSOs prevalent and popular in the market. Ranking of SEPs in terms of popularity could be a proxy to assessment of price ranges. Understanding the complex market indications of which were given in the first part could help to comprehend why there is no compulsion to use that patent even though it has been classified as ‘essential’? In fact, a more clear understanding of the concept ‘essential’ in SEP comes to the forefront as argued in the Order as a criteria of dominance.

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<sup>24</sup>ibid.

<sup>25</sup>The counter to the per se approach is that ‘shall’ is also used in the context of listing abuses is an argument that to the author is not sustainable.

<sup>26</sup>According to the author, there is no record of this clause.

An inappropriate assessment of dominance can have long term damaging effects especially in the emergent technology and communications sectors. Scholars have hinted at the conservative approach of the Commission and some have termed it as ‘Reductionist Approach of CCI’ based on analysis of earlier decisions.<sup>27</sup> There is also a tendency to obfuscate the definition of consumer and in identifying a competitor as the consumer.

The proclivity of the Commission is more towards a conservative approach except that where IPR and SEP cases are concerned (as they pertain to agreements between an SEP owner and the buyer of the license). Section 3(4) would be the appropriate section for the scope afforded for assessing anticompetitive effects. Section 3(4) does not require establishing dominance. By traversing from Section 4 to Section 3(4) dominance is already established and abuses of Section 3(4) which are considered to cause AAEC are equated with abuses of dominance under Section 4 without the need for an investigation into possible efficiency outcomes listed under Section 19(3). This Section which lays down factors that need to be considered in assessing anticompetitive effects of vertical agreements includes both positive and negative outcomes that need examination before arriving at a decision. Section 19(4) only lays down factors that measure dominance. Contracts and agreements constitute the area of Section 3(4). Obfuscation of sections is distortionary with unintended outcomes affecting the sector, the economy and consumers.

## 4 Conclusion

This chapter addresses a few issues and highlights some of the critical misconceptions pertaining to SEPs and FRAND. The author’s analysis points towards an effects based approach to technology, to patents and to SEPs. The ever growing evidence briefly summarized above reflects a dynamic market sustained on innovative and disruptive technological developments. Creating uncertainty by extending antitrust action of dominance where SEPs are involved could negatively impact the growth of the telecommunications sector and of technological development itself.

The author has shown how dominance itself is ephemeral. The prevalence of competitive constraints and the continuous changing scenarios that SEPs represent would require a rational approach to capture network economies. Pricing of patents and royalty payments accordingly need to be valued, based on the value created by networks. It also means that definition of ‘fair, reasonable, and non-discriminatory’ have to be located in the economic principles of pricing and not applied in a

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<sup>27</sup>Yogesh Pai and Nitesh Daryanani, ‘Patents and Competition Law in India: CCI’s Reductionist Approach in Evaluating Competitive Harm’ (2017) 5(2) Journal of Antitrust Enforcement 299.

commonplace meaning. The aspect of SEP, technological development and innovation is a complex relationship. Several competition authorities are engaged in understanding the dimensions of competition law and IPRs without extending the liability.

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# Chapter 13

## Interface Between Antitrust Law and Intellectual Property in the Payment Systems Market in India



**Yogesh Dubey and Konark Bhandari**

### 1 Introduction

In one fell swoop, on 8 November 2016, the Indian government outlawed certain notes of high denomination with the result being that approximately 86% of the currency that was in circulation, lost its status as legal tender.<sup>1</sup> The vernacular press referred to it as ‘notebandi’, meaning ‘banning of notes’. However, irrespective of the semantics, one thing was for sure that this was a far reaching event that had irreversibly changed the course of the Indian payments industry. For instance, prior to demonetization, the usage of cashless payment as an option was popular and had increased 22% from October 2015 to October 2016. But post-demonetization, the usage of cashless payment instruments had returned to levels that existed prior to demonetization. Except for one cashless payment instrument—Unified Payment Interface (UPI).<sup>2</sup>

In April 2015, UPI, was launched by the National Payments Corporation of India (NPCI), the umbrella organization for every retail payment system in India.<sup>3</sup> It

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<sup>1</sup>‘Currency in Circulation at 90% of level before note ban’ (*LiveMint*, 20 October 2017) <<http://www.livemint.com/Politics/Zp9V2MR6szRwCwEuPjJIKK/Currency-in-circulation-at-90-of-level-before-note-ban.html>>.

<sup>2</sup>Dinesh Unnikrishnan, ‘Shift to cashless economy: demonetisation has indeed boosted digital payments but let’s not over-hype it’ (*Firstpost*, 17 July 2017) <<http://www.firstpost.com/business/shift-to-cashless-economy-demonetisation-has-indeed-boosted-digital-payments-lets-not-over-hype-it-3822579.html>>.

<sup>3</sup>National Payments Corporation of India, ‘NPCI presents Unified Payments Interface (UPI) System’ (11 April 2016) <[https://www.npci.org.in/sites/default/files/UPI\\_Launch\\_Press\\_Release\\_April\\_11\\_2016.pdf](https://www.npci.org.in/sites/default/files/UPI_Launch_Press_Release_April_11_2016.pdf)>.

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was an immediate payment system using a mobile application that would allow instantaneous money transfer between various bank accounts.

As stated by NPCI, ‘UPI is a unique payment solution as the recipient is now empowered to initiate the payment request from a mobile. It facilitates ‘virtual address’ as a payment identifier for sending and collecting money and works on single click two factor authentication.’<sup>4</sup>

Although introduced earlier in April 2016, it was only in August 2016 that the mobile applications of various participating banks became operational,<sup>5</sup> thereby officially ushering in a new era for digital payments in India. However, it was only with the advent of demonetization that the UPI started to gain traction and witnessed swift adoption by users. The data collated post demonetization validates this statement.<sup>6</sup> While the user friendly interface definitely helped with the rapid adoption rate, the UPI was largely successful because it was a unique payment system, heralded by many as unlike any other before it, anywhere in the world.<sup>7</sup> Demonetization only increased the awareness of such unique and alternative payment systems.

## 2 Interoperability and the Functioning of UPI

### 2.1 Working of UPI

Aside the technical verbiage employed by the NPCI when introducing UPI, one must investigate the working of UPI. While using the UPI app, a customer can initiate a transaction by sending funds to the intended beneficiary by way of linking his bank account to his mobile number and by selecting the mobile number of the beneficiary (and provided that such beneficiary has also downloaded a UPI app). As a second step, the amount to be transferred has to be entered, followed by entering a four digit Personal Identification Number (PIN) authenticating the transaction. The attractive feature of UPI was arguably that a user could avail the UPI app of any bank, even a bank where the user did not have a bank account, to credit money from his bank account (at a different bank) to an altogether different bank account. All these happened in real time. i.e. the unique selling point was that it did not matter if the bank whose app the user was using hosted his actual account.

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<sup>4</sup>ibid.

<sup>5</sup>National Payments Corporation of India, ‘NPCI’S Unified Payments Interface (UPI) set to go live’ (25 August 2016) <<https://www.npci.org.in/sites/default/files/NPCIsUnifiedPaymentsInterface%28UPI%29settogoliveAugust252016.pdf>>.

<sup>6</sup>Unnikrishnan (n 2).

<sup>7</sup>Arundhati Ramanathan, ‘The unlikely story Of BHIM, the upsetter of plans’ *The Ken* (25 January 2017) <<https://the-ken.com/unlikely-story-of-bhim/>>.

## 2.2 *Interoperability*

The feature of interoperability has so far remained available only to banks. In other words, other payment instruments, such as mobile wallets have thus far, not been able to avail this facility. Interoperability would permit the user of a particular type of mobile wallet to transfer or receive money from the user of a different brand of mobile wallet. Recently, a Reserve Bank of India's (RBI) Master Direction has mandated that mobile wallets must be made interoperable with one another and subsequently, at a later stage, also made interoperable with banks.<sup>8</sup> At the outset, it means that once interoperability is operational between mobile wallets *inter se*, mobile wallet users of one particular company would be able to transfer funds to and from the mobile wallets of other companies. Afterwards, the second stage of interoperability will entail that mobile wallet users will also be able to transfer money to and from different bank accounts.

## 2.3 *Difference Between Mobile Wallets and UPI Apps*

When compared to mobile wallets, UPI apps are widely seen as more convenient and easy to use. This is due to the fact that compared to mobile wallets; they have a substantially higher transaction limit of ₹ 1 lakh per day compared to the ₹ 20,000 per month that can be transacted through mobile wallets (without Know Your Customer (KYC) and ₹ one lakh per month with KYC); are interoperable with one another; do not require frequent topping up (as they are linked to a bank account); are viewed as more secure; and do not require any tie-up with any merchants unlike mobile wallets.

Despite this, mobile wallets remain popular among all strata of users (customers and merchants), even though the adoption rate of such mobile wallets appears to be tapering.<sup>9</sup> The most popular UPI app remains PhonePe, owned by Indian e-commerce major Flipkart and partnered with Yes Bank (since it is the bank that has the right of securing a license from RBI and while software developers can

<sup>8</sup>Suneeth Katarki, Ashi Bhat and Anoop Ashok, 'Master Direction on Issuance and Operation of Prepaid Payment Instruments' (*Mondaq*, 20 November 2017) <<http://www.mondaq.com/india/x/647880/Financial+Services/Master+Directions+On+The+Issuance+And+Operation+Of+Prepaid+Payment+Instruments+In+India>>.

<sup>9</sup>ibid; Mobile wallets have been arguably more adept at stealing a March over UPI apps due to their simple interface, ease of use, cashbacks, and being less prone to bugs. However, data released by the RBI for digital transactions showed that for UPI, the transaction volume saw a month on month increase of approximately 85% to 30.8 million transactions in September 2017. Further, the value of transactions rose from ₹ 4,127 Crores to ₹ 5,293 Crores in September from the previous month, an increase of 28%. This in contrast to PPIS such as mobile wallets which saw a high transaction volume of 87.5 million, yet a comparatively lesser value being transacted at ₹ 2,759 Crores. Komal Gupta, 'Digital Transactions Rose 13.5% to ₹ 124.69 tn in September: RBI' (*LiveMint*, 2017).

develop the app and implement it, the infrastructure has to be provided by the bank) with 45 million users<sup>10</sup>: They are trailed by the government promoted BHIM app, which as per the latest press release by NPCI had 16 million users.<sup>11</sup> This is considerably lesser than the user base of 200 million enjoyed by India's largest mobile wallet company, Paytm.<sup>12</sup>

Therefore, it is apparent that after the introduction of UPI, the UPI apps of banks have stolen a March over the likes of mobile wallets (in terms of value of transactions) owing to the factors enumerated earlier. There are certain factors that explain this impressive growth. As mentioned earlier, the biggest attraction for users when downloading a UPI app was that it was platform neutral and allowed for interoperability, i.e. it did not matter whether the user had an account at the bank whose UPI app he was downloading. The same however, has remained elusive for mobile wallets, until recently, when the RBI issued a Master Direction requiring compulsory interoperability. However, as we shall see later in the course of this chapter, even the RBI mandating interoperability among mobile wallets *inter se* and between mobile wallets and banks is unlikely to drive further growth for mobile wallets owing to the simultaneous tweaking of certain regulatory norms for the mobile wallets regime.

In the following paragraphs, it is analyzed that why mobile wallets were 'left out' when the feature of interoperability was being extended to banks? The reasons could possibly range from any, to all the following:

- (a) Fear of mobile wallets capturing a substantial part of the banks' business: Initially, when mobile wallet companies started operations, they focused only on ancillary and niche business segments such as insurance or loan products. Once mobile wallets started to make incursions into what was regarded as the domain of banks (such as the payments business),<sup>13</sup> the banks responded with hostility.<sup>14</sup> State Bank of India (SBI), India's largest bank, blocked its customers from being able to transfer any money to the mobile wallet run by Paytm.<sup>15</sup> While no senior bank

<sup>10</sup>Arundati Ramanathan, 'RBI Has Kicked off a Shark Fight for Wallet Users' *The Ken* (16 October 2017) <<https://the-ken.com/story/rbi-kicked-off-shark-fight-wallet-users/>>.

<sup>11</sup>National Payments Corporation of India, 'NPCI's BHIM App crosses 16 million downloads mark' (24 July 2017) <<https://www.npci.org.in/sites/default/files/NPCI-BHIM-App-crosses-16-million-downloads-mark.pdf>>.

<sup>12</sup>Mugdha Variyar, 'Paytm wallet reaches 200 million users' *The Economic Times* (28 February 2017) <<https://economictimes.indiatimes.com/small-biz/startups/paytm-wallet-reaches-200-million-users/articleshow/57371236.cms>>.

<sup>13</sup>Arundati Ramanathan, 'Barbarians at the Gate' *The Ken* (1 March 2017) <<https://the-ken.com/barbarians-at-the-gate/>>.

<sup>14</sup>Goutam Das 'Shrinking Wallets' *Business Today* (New Delhi, 4 June 2017). It is however, debatable whether the banks were all that interested in their payments business since it's a low margin business as per most industry experts and the source of revenue thus far for banks was mostly card companies that would provide the banks a pre-determined Merchant Discount Rate every time a merchant used a bank's credit or debit card for accepting payment.

<sup>15</sup>ibid.

official may go on the record and admit that mobile wallets were cannibalizing their payments business, it is not wholly inconceivable that by also making mobile wallets fully interoperable, the banks might have had to face the attendant risk of such mobile wallet companies further nibbling away at their payments business—a business which received a fillip with the advent of the UPI. Indeed, ICICI Bank did block its customers from availing the PhonePe UPI app operated by Flipkart by alleging a transgression of interoperability rules. Another potential reason could be that by extending interoperability to mobile wallets, the banks may suffer on account of lesser realization of service fees that they currently charge the mobile wallet company every time a user debits money from his bank account and into his mobile wallet. With interoperability, the mobile wallet user may also top-up his mobile wallet balance by transferring the amount from another mobile wallet and forego using a bank account linked to his mobile wallet.

- (b) The regulatory architecture of NPCI: The NPCI is the body that has been responsible for introduction and implementation of UPI. It is interesting to note that the role of NPCI is nebulously defined. It is currently involved with an assortment of activities ranging from: operating a payment systems such as IMPS and UPI; being a quasi-regulator; and being an app owner in the form of BHIM. With such a variety of roles, there appears to be a conflict of interest here. At its core, the NPCI is comprised of 56 member banks, most of which have come out with their own UPI app, while at the same time, it is entrusted with defining the contours of how the UPI payment system will operate for others. This, as seen above, has been to the detriment of mobile wallet companies. This has been recognized by the Ratan Watal Committee Report on Digital Payments constituted by the Ministry of Finance, Department of Economic Affairs.<sup>16</sup> It has been suggested that ‘only bank led PSPs (payment service providers) have direct access to payment systems’.<sup>17</sup>
- (c) RBI’s reluctance to relax regulations on mobile wallets: In addition to NPCI (which implements the UPI), the RBI has regulatory oversight of how prepaid payment instruments are governed.<sup>18</sup> So far, the RBI too, was hesitant to allow mobile wallets to be fully interoperable because only banks were allowed to accept deposits. Since deposits are public money, the banks were tightly regulated. Mobile wallets did not enjoy regulatory scrutiny to the same extent and therefore there was a risk with interoperability. It was feared that if something goes wrong, the mobile wallet companies will not be able to recoup the losses.

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<sup>16</sup>Press Information Bureau, ‘Committee on Digital Payments Headed by Shri. Ratan P Watal, Principal Advisor, NITI Aayog and former Finance Secretary submits its final report to the Union Finance Minister Shri Arun Jaitley today’ (9 December 2016).

<sup>17</sup>Committee on Digital Payments, ‘Medium term recommendations to strengthen digital payments ecosystem’ (2016).

<sup>18</sup>Katarki (n 8); All entities that have been issuing PPIS have been operating within the regulatory framework of RBI’s ‘Policy Guidelines for Issuance and Operation of Pre-paid Payment Instruments in India’, issued on 27 April 2009, and most recently amended vide a master circular dated 1 July 2016.

According to industry insiders, the RBI was taking a risk at the outset by letting mobile wallet companies to take deposits.<sup>19</sup> With the issuance of the latest Master Directions on 11 October 2017, however, the RBI has apparently overcome any doubts about the risk involved.

- (d) Exploiting the data available: Cash still remains king and is the predominant payment mode for transacting business.<sup>20</sup> Further, there remains little clarity on how and where the cash is spent. However, whenever a user avails his bank-issued credit/debit card or net-banking, such spending pattern can be configured by the bank. With the arrival of mobile wallet companies, this became a challenge for the banks since now the users began debiting money to their mobile wallets and started spending through these wallets. The banks lost track of the spending trail and the mobile wallets became the sole repositories of such data. With their constant revision of algorithms and updating of software, mobile wallet companies are also better placed to project the trajectory of how the wallet users will use their money in future. By preventing interoperability, the NPCI sought to prevent losing further data and make all UPI app developers (who must partner with a bank as per RBI instructions) share data which the UPI app developer possesses.<sup>21</sup>

However, the RBI has mandated that the feature of interoperability be introduced for mobile wallets as well, albeit in a phased manner. Despite this direction by the RBI, the promise of interoperability may not fructify in the manner as is envisioned by mobile wallet companies. This will be explained in the following part.

### **3 Reserve Bank of India—Reservations on Mobile Wallets**

#### **3.1 RBI Master Direction dated 11 October 2017**

While the Master Direction is wide ranging and covers lot of matters, the following issues are significant from the perspective of this chapter:

- (i) Interoperability to be permitted: The Master Direction requires that interoperability be introduced, albeit in a phased manner. First, with KYC-

<sup>19</sup>Ramanathan (n 10).

<sup>20</sup>Vindu Raj and Suhasini Raj, 'India Clings to Cash, Even as Tech Firms Push Digital Money' *The New York Times* (7 January 2018) <<https://www.nytimes.com/2018/01/07/technology/india-digital-money.html>>.

<sup>21</sup>Although it should be noted that with the issuance of the most recent RBI circular dated 11 October 2017, PPI issuers such as mobile wallets would have to share any data with the RBI and 'any other agency/agencies as may be advised by RBI'. This has apparently been done to counter money laundering.

compliant mobile wallets will be interoperable amongst themselves and subsequently, interoperability will be enabled between wallets and banks through UPI.

- (ii) KYC norms to be strengthened: As a result of the new KYC norms, every mobile wallet user's supporting documents will be verified by an agency commissioned by the mobile wallet company. This has been viewed by many as sounding the death knell for mobile wallets, which already operate on wafer thin margins.<sup>22</sup> The fear is that the customer acquisition cost will be too exorbitant.<sup>23</sup> Essentially, it appears that whatever advantage the mobile wallets would have secured with interoperability has been squandered with the implementation of the stringent KYC rule. This would, in effect, amount to a re-acquisition of existing customers, many of whom might not want to go through the requirement of KYC.
- (iii) Successive transactions are required to be authenticated with customer consent: Under the Master Direction, 'issuers shall introduce a system where every successive payment transactions in wallet is authenticated by explicit customer consent.'<sup>24</sup> This would apparently bring the mobile wallet at par with UPI apps which also requires a PIN for authentication of the transaction.
- (iv) Capital requirements of Pre-Paid Instruments (PPI) issuers such as mobile wallets raised substantially: Under the revised Master Direction, non-bank entities must have a positive net worth of ₹ five Crores. Under the earlier RBI policy guidelines on PPIs, the minimum positive net worth was stipulated at ₹ one Crore. No reason has been attributed for this 400% increase in the minimum positive net worth requirement. Although it may be possible that by ensuring a higher net worth requirement, only serious players with a long-term vision for the sector will participate.

As mentioned above, certain changes in the RBI Master Direction render interoperability ineffective, since the mobile wallets may view the costs of conducting a KYC exercise as needlessly burdensome. Accordingly, the Master Direction may be viewed by mobile wallet companies as unfair and inequitable.<sup>25</sup>

<sup>22</sup>Goutam Das, 'The Money Revolution' *Pressreader* (4 June 2017). While merchants must pay a commission of approximately 1.8% to the mobile wallet company when there is a transaction, the mobile wallet company has to pay 1.5% service fee to the bank when money is debited from a bank account to a mobile wallet. Since users are not charged for anything, the business model of mobile wallet companies operates on a very low margin.

<sup>23</sup>Das (n 14).

<sup>24</sup>Master Direction, Clause 15.3 (c).

<sup>25</sup>However, even if the RBI has the power to prescribe guidelines on any issue falling within the purview of its mandate under the PSS Act, it should still ensure that the guidelines/circulars framed thereunder are not arbitrary and unreasonable. For instance, a perusal of the Master Direction makes it clear that the RBI has sought to regulate PPIs such as mobile wallets at par with banks—whether it is KYC norms/onerous capital requirements/authentication protocol. In doing so, the RBI is prescribing similar norms for both banks and mobile wallets despite the various differences that exist between the two and which have been alluded to above. Since the banks and PPIs do not

## 4 European Commission and the Competition Commission of India—Drawing Parallels

European Commission (EC) and European Parliament guidelines/briefing on interoperability. A 2012 Green Paper of the EC has recognized the need for interoperability among, *inter alia*, application developers and banks.<sup>26</sup> A European Parliament Briefing on the consumer protection aspects of mobile payments reiterated the same in the following manner:

As technology advances rapidly and options for mobile payment increase, lack of interoperability (including cross-border) between service providers is an issue. Better interoperability would provide consumers with more flexible payment options (better switching between different services and providers), leading to an increase in the number, speed and volume of mobile transactions. Better financial inclusion could be another benefit of more accessible and flexible services for consumers (also for the most vulnerable ones). Payments normally flow through the banking system, but mobile payments currently offer low regulatory entry barriers for new players, which could influence the payments markets, traditionally dominated by banks.

However, one needs to ask whether Competition Commission of India (CCI) should replicate the approach of EC. In this regard, it should be noted that a comparative assessment of the legislative scheme of Section 4 of the Competition Act 2002 and Article 102 of the Treaty for the Functioning of the European Union (TFEU) displays many similarities:

- (a) Definition of ‘dominant position’—Explanation (a) to Section 4 of the Act defines ‘dominant position’ as follows:  
‘Dominant position’ means a position of strength, enjoyed by an enterprise, in the relevant market, in India, which enables it to –
  - (i) operate independently of the competitive forces prevailing in the relevant market; or
  - (ii) affect its competitors or the relevant market in its favor.

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form a homogenous class, their similar treatment despite being dissimilar in their characteristics, amounts to unreasonable classification and may be treated as being *ultra vires* of Article 14 of the Constitution of India. Indeed, a former RBI deputy governor had remarked that ‘if you don’t insist on the same type of terms for banks and wallets, then there is clear arbitrage, and it is tantamount to picking a winner’, further adding that ‘if RBI doesn’t lay terms of security and KYC, then wallets will be at a clear advantage.’ This statement is reflective of bias that exists in favour of banks and may have led to the bracketing of banks and mobile wallets in a similar category—a categorization that may be unreasonable.

<sup>26</sup>The mobile payment market in Europe is still in its infancy. One of the main barriers to widespread take-up of m-payments seems to be a stalemate between Mobile Network Operators (MNOs), traditional PSPs (banks) and other players, such as manufacturers or application developers’, Commission, *Towards an Integrated European Market for Card, Internet and Mobile Payments* COM (2011) 0941 final.

This definition of ‘dominant position’ is derived from the European Court of Justice (ECJ)<sup>27</sup> decisions that have expounded on the concept of ‘dominant position’. This is also mentioned (but not defined) in Article 102 of the TFEU.<sup>28</sup>

Elaborating upon the concept of ‘dominant position’, the ECJ judgements in the *United Brands* case<sup>29</sup> and the *Hoffmann-LaRoche* case<sup>30</sup> say that dominant position is:

position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers.<sup>31</sup>

- (b) Special responsibility on dominant enterprises—Section 4 of the Act is different from Section 3 in the sense that the proscribed conduct under Section 4 (2) is applicable only to dominant enterprises whereas the appreciable adverse effect on competition prohibited under Section 3 can be caused by any enterprise or enterprises.

This dichotomy between the two sections only serves to highlight the ‘special responsibility’ imposed upon a dominant enterprise to not to distort competition. Although, this special responsibility has not explicitly been mentioned in the Act, it can be inferred from the language of the Act as shown in the preceding paragraph. Indeed, the CCI recognized this ‘special responsibility’ while deciding the landmark *DLF* case<sup>32</sup> in paragraph 12.20 of its Order.<sup>33</sup> DLF argued<sup>34</sup> that the

<sup>27</sup>Presently called as Court of Justice of the European Union or CJEU.

<sup>28</sup>TFEU, art 102:

Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.

Such abuse may, in particular, consist in:

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

<sup>29</sup>Case 27/76 *United Brands v Commission of The European Communities* (1978) ECLI:EU:C:1978:22.

<sup>30</sup>Case 85/76 *Hoffmann-La Roche & Co. AG v Commission* (1979) ECLI:EU:C:1979:36.

<sup>31</sup>*United Brands* (n 29), para 65; ibid, para 38; OECD, ‘Country Studies: European Commission-Peer Review Of Competition Law And Policy’ (2005).

<sup>32</sup>*Belaire v DLF* (2011) Competition Commission of India, Case No 19 of 2010.

<sup>33</sup>ibid.

<sup>34</sup>ibid, para 8.5.

conditions in the apartment buyer's agreement could not have been imposed due to abuse of dominant position since these were standard clauses in the majority of apartment buyer's agreement executed by any real estate developer and therefore, have been incorporated to meet the competition—something that is a defense as per the Explanation under Section 4(2)(a) of the Act. The CCI rejected this argument by saying that the responsibility of the dominant player is more onerous and similar practices by other developers would not fall within the ambit of Section 4.

In recognizing the concept of special responsibility, the CCI has taken a leaf out of the book of the ECJ in the *Michelin* case.<sup>35</sup> The ECJ held that:

a finding that an undertaking has a dominant position is not in itself a recrimination but simply means that, irrespective of the reasons for which it has such a dominant position, the undertaking concerned has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market.<sup>36</sup>

The CCI's decision was confirmed by the Competition Appellate Tribunal (COMPAT) in its order as well where it reasoned that DLF, being 'a dominant player in the market, has a special duty to be within the four corners of the law'.<sup>37</sup>

The CCI had also reiterated its position on the special responsibility of the dominant enterprise in the *Car Manufacturers Spare Parts* case.<sup>38</sup> It opined that the pro-competitive factors listed under Section 19(d)–Section 19(f) must be given less weightage than the anticompetitive factors under Section 19(a)–Section 19(c) when evaluating a vertical agreement by a dominant enterprise that forecloses the market. In doing so, it explicitly cited the *Michelin* case for the first time.<sup>39</sup>

Collective/Joint Dominance - Article 102 of the TFEU is not restricted to single firm conduct.<sup>40</sup> The ECJ too recognizes the theory of collective/joint dominance under which several firms can share and abuse a dominant position.<sup>41</sup>

India too is seeking to introduce this concept by amending its competition legislation. The Competition (Amendment) Bill 2012 discusses the possibility of inserting language that would enshrine the concept of collective/joint dominance. It will do so by inserting 'jointly, or singly' after the word 'group' under Section 4(2). If it decides to do so, it will be following the lead of the EC.<sup>42</sup>

<sup>35</sup>Case 322/81 *NV Nederlandsche v Commission of the European Communities* (1983) ECLI:EU:C:1983:313.

<sup>36</sup>ibid, para 57.

<sup>37</sup>DLF v CCI (2014) COMPAT, W.P. (C) 6361/2014 and 6362/2014.

<sup>38</sup>Shamsher Kataria v Honda, Volkswagen, Fiat and Others (2011) Competition Commission of India, Case No. 03/2011.

<sup>39</sup>ibid, para 20.6.35.

<sup>40</sup>Any abuse by *one or more undertakings* of a dominant position.

<sup>41</sup>Case C-393/92 *Municipality of Almelo and Others v Energiebedrijf IJsselmij NV* (1994) ECLI:EU:C:1994:171; Joined Cases T—68/89, T—77/89 and T—78/89 *Italian Flat Glass Case* (1992) Judgement of the court (First Chamber) ECLI:EU:T:1992:38.

<sup>42</sup>Collective dominance is a complex concept and is not widely used. In the European Union, it did not find place in the original legislation (The Treaty for the European Union or TFEU) but grew during the 1990's through certain decisions of the courts. It has taken the courts several cases

The Confederation of Indian Industry (CII) has however, voiced its concern over inserting under Section 4 since, Section 4 does not require the showing of an ‘agreement’ and therefore, the CCI would have unbridled discretion in determining what constitutes collective dominance. Not requiring the showing of an agreement might again put India in the same category as the EC since the judgement of the court (of the Fifth Chamber) had dispensed with the need to show an agreement in case of collective dominance.<sup>43</sup> The court had held as follows:

The existence of a collective dominant position may therefore flow from the nature and terms of an agreement, from the way in which it is implemented and, consequently, from the links or factors which give rise to a connection between undertakings which result from it. Nevertheless, the existence of an agreement or of other links in law is not indispensable to a finding of a collective dominant position; such a finding may be based on other connecting factors and would depend on an economic assessment and, in particular, on an assessment of the structure of the market in question.<sup>44</sup>

Not required to show anticompetitive effect—Section 4 of the Act does not require a showing of an actual appreciable adverse effect on competition. Therefore, no competitive impact is required to be shown in case of abuse of dominance by an enterprise. This is similar to the position in the EC as well. To reach a finding of infringement, it is not necessary to show that the alleged abusive conduct produced an actual anticompetitive effect. It is enough to show that the conduct is likely to have or capable of having that effect.<sup>45</sup>

Predatory Pricing—The concept of predatory pricing has been mentioned in Section 4 of the Act. It is interesting to note that the language used in the act signifies that ‘intent’ has to be shown when alleging predatory pricing conduct by an enterprise. This is because the language used says it must be conducted ‘with a view to reduce competition or eliminate the competitors’.<sup>46</sup> In such a case, it would not be dissimilar to the position espoused in some EC cases. In *France Telecom SA v Commission of the European Communities*,<sup>47</sup> the court reiterated its earlier stand in *AKZO v Commission*<sup>48</sup> and *Tetra Pak v Commission*<sup>49</sup> when it said that prices

to progressively develop and clarify the concept, yet it is not frequently resorted to even in the EU’, Vinod Dhall, ‘Written submission to the Standing Committee on Finance’, 15th Lok Sabha, Ministry of Corporate Affairs, The Competition (Amendment) Bill 2012, 83rd Report, para 35.

<sup>43</sup>Joined Cases C-395/96 P and C-396/96 P *Compagnie v Dafra-Lines* (2000) Judgement of the court (Fifth Chamber) ECLI:EU:C:2000:132.

<sup>44</sup>ibid, para 45.

<sup>45</sup>*United Brands* (n 29).

<sup>46</sup>Explanation (c) to s 4.

<sup>47</sup>Case C-202/07 P *France Télécom SA v Commission of the European Communities* (2009) Judgement of the court (First Chamber) ECLI:EU:C:2009:214.

<sup>48</sup>Case C-62/86 AK *AKZO Chemie v Commission of the European Communities* (1991) Judgement of the court (Fifth Chamber) ECLI:EU:C:1991:286.

<sup>49</sup>Case C-333/94 P *Tetra Pak International SA v Commission of the European Communities* (1996) Judgement of the court (Fifth Chamber) ECLI: EU:C:1996:436.

below average variable cost (AVC) are always considered abusive, but prices above AVC and below average total cost would require the showing of an intent to eliminate.<sup>50</sup>

**Excessive Pricing**—While the US has not come up with a definite standard for assessing excessive pricing cases,<sup>51</sup> the TFEU does provide against the imposition of excessive prices. While ‘excessive price’ may not find a mention in Article 102 of the TFEU, it is generally understood to be covered by the prohibition under Article 102 (a) on charging ‘unfair prices’.<sup>52</sup> This observation has been upheld by various judgements of the European Courts and EC as well.<sup>53</sup>

India too has tendered the notion that ‘excessive price’ is a subset of ‘unfair price’ in its written submissions to OECD Policy Roundtables on Excessive Pricing.<sup>54</sup> Evidently, this is similar to the position taken in Europe. Again, like the EC law, the Indian Competition Act does not define ‘unfair price’. Therefore, it is left to the CCI to interpret what constitutes unfair price. Perusing through the few cases that the CCI has adjudged on excessive pricing issues, it is heartening to note that the CCI has not decided to become a price regulator and intervene indiscriminately. The *DIAL/MIAL* case<sup>55</sup> dealt with the allegation that DIAL/MIAL were charging excessive vehicle parking rates and the informant prayed that the rates be brought down by the CCI to the rates at the Kolkata/Chennai airports or the rates charged before privatization. The CCI refused to intervene, by holding that (a) there was competition at the time of bidding by consortia, (b) aeronautical services and non-aeronautical services cannot be looked into separately and (c) space should be ceded to the market forces of demand and supply in case of parking space, which is scarce at airports to begin with. Similarly, in the case of *Manjit Singh Sachdeva v DGCA*,<sup>56</sup> the CCI (in response to a request by the informant to direct the Director General of Civil Aviation (DGCA) to fix a maximum retail price for airline tickets) said that the free market forces of demand and supply should govern the price.

<sup>50</sup>ibid, para 33.

<sup>51</sup>The FTC notes in its report that when the question was presented in court, judges have resorted to a case by case analysis and those decisions ‘have not been particularly consistent’. It further states that given ‘the uncertainty about what constitutes an unconscionable, excessive or exorbitant price, and the paucity of decisions on the issue, statutes based on any of these terms are likely to be difficult to enforce.’

Directorate for Financial and Enterprise Affairs Competition Committee, ‘Working Party No. 2 on Competition and Regulation Excessive Prices- Background Paper’ DAF/COMP/WP2 (2011)7/REV1 (9 January 2012) <<http://www.oecd.org/regreform/sectors/49482277.pdf>>.

<sup>52</sup>ibid.

<sup>53</sup>*United Brands* (n 29).

<sup>54</sup>Directorate for Financial and Enterprise Affairs (n 51).

<sup>55</sup>*Citizen Grievances v Mumbai International Airport* (2013) Competition Commission of India, Case No 51 of 2013.

<sup>56</sup>*Mr Manjit Singh Sachdeva v Directorate General of Civil Aviation* (2012) Competition Commission of India, Case No 68/2012.

This is similar to the outlook of the EC where cautious enforcement of antitrust laws is practiced, since it is seen as ‘preferable to give market forces the time to play out and entry and expansion to take place, thereby bringing prices back to more normal levels’.<sup>57</sup> Therefore, from the above, it appears that the legislative scheme of the Act is significantly influenced by the jurisprudence of the EC on antitrust law. All this is significant as we proceed to examine whether the antitrust law doctrine of Essential Facilities originating in the EC can find resonance in the payments market in India.

## 5 The Essential Facilities Doctrine

Before commencing with a discussion on the Essential Facilities Doctrine (EFD), it is important to consider a few hypothetical situations. Considering how significant interoperability is to the future of mobile wallets—what if the RBI Master Direction was to be implemented in its current form? As mentioned earlier, the addition of regulations pertaining to KYC norms, capital requirements and authentication would probably be a disincentive for mobile wallets and certainly takes away whatever benefit the mobile wallets would have derived from interoperability. However, what if, theoretically speaking, these other regulations were struck down by a court or withdrawn by the RBI? Would interoperability still be extended to mobile wallets? If it was extended, what if the banks still refused to provide the Application Programming Interface (API) required for interoperability? In such a scenario, and most significantly, could the EFD be invoked by mobile wallets to secure access to such API?

Assuming that banks refuse the API, how would the EFD be invoked by the mobile wallets? Before answering these questions, it is necessary to understand the origins of the EFD and the decisional practice concerning the doctrine followed by the EC.

Practice of the EC in EFD cases are:

- (a) *Commercial Solvents* case<sup>58</sup>: Commercial Solvents Corporation (CSC) was the parent company of Istituto, a company incorporated under Italian law. Istituto was the reseller of aminobutanol, which was an intermediary product for the manufacture of ethambutol and ethambutol-based specialties, used as an anti-tuberculosis drug. Zoja Istituto’s customer also used the aminobutanol for the manufacture of ethambutol-based specialties. In 1970, CSC stopped supplying aminobutanol to the European Union. At the end of 1970, when Zoja

<sup>57</sup>Directorate for Financial and Enterprise Affairs Competition Committee, ‘Policy Roundtables: Excessive Prices’ DAF/COMP(2011)18 (7 February 2012) <<http://www.oecd.org/competition/abuse/49604207.pdf>>.

<sup>58</sup>C 6-7/73 *Commercial Solvents v Commission* (1974) Court of Justice of European Union ECLI: EU:C:1974:18.

placed a new order for aminobutanol, CSC responded that there is no availability of the same. It also happened to be the case that CSC was the only possible source of aminobutanol in the world market. Zoja moved the EC for institution of proceedings against CSC. The EC decided to require CSC to supply, *inter alia*, 30,000 kg of aminobutanol to Zoja. CSC challenged this aforementioned EC order before the ECJ. The EC's stance was that 'discontinuance of the supply of aminobutanol had the effect that Zoja was forced to discontinue its manufacturing process and to become a mere packer and distributor of ethambutol.'<sup>59</sup> The ECJ observed that the fact Zoja had survived so far does not alter the fact that Zoja had disappeared from the market as a manufacturer of ethambutol.

One of the justifications advanced by CSC in cutting back the sale of aminobutanol and other raw materials required to make ethambutol was that it had been CSC's longstanding policy to come into closer connection with the end user and therefore decided to have more raw materials available for itself to make sales of the final derivative product.<sup>60</sup>

However, the ECJ found the same conduct to be abusive.<sup>61</sup> It remarked as follows:

It follows that an undertaking which has a dominant position in the market in raw materials and which, with the object of reserving such raw material for manufacturing its own derivatives, refuses to supply a customer, which is itself a manufacturer of these derivatives, and therefore risks eliminating all competition on the part of this customer, is abusing its dominant position.<sup>62</sup>

- (b) *Magill* case<sup>63</sup>: RTE and ITP, two broadcasters, had a stringent policy regarding dissemination of programme listings wherein only daily listings were to be provided to daily and periodical newspapers. When Magill attempted to publish

<sup>59</sup>*ibid.*

<sup>60</sup>*Commercial Solvents* (n 58).

<sup>61</sup>It should be noted however, by forcing CSC to supply aminobutanol to Zoja in complete disregard of its longstanding policy to establish a direct connection with the end user would raise the following issue:

Duty to shareholders v Duty to competitors: The directors of a company which controls or maintains hold over a key raw material, may find themselves in a quandary when deciding whether to supply such raw materials to others. One argument could be that the EFD would mandate they should supply it. However, Section 166 of the Companies Act 2013 which prescribes the duties of directors mentions, *inter alia*, that a director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole, and in the best interests of the company, its employees, the shareholders, the community and for the protection of environment. Which duty would prevail? The duty to supply to others in the market? Or the duty to look out for the best interests of shareholders and act in the best interests of the company?

<sup>62</sup>*Commercial Solvents* (n 58).

<sup>63</sup>C-241/91 and C-242/91 *Radio Telefis Eireann v Commission* (1995) Court of Justice of European Union ECLI:EU:C:1995:98.

a weekly TV guide, it was prevented from doing so by both RTE and ITP. Magill approached the Commission to seek a ruling that both RTE and ITP were abusing their dominant position by refusing to grant licenses for publication of their weekly TV listings. The EC found a breach and ordered the defendants to supply to third parties on request, on a non-discriminatory basis with their individual advance weekly programme listings for the purpose of publication. The Court of First Instance (CFI) affirmed the decision of the EC. The CFI held that the third parties like Magill were in a position of ‘economic dependence’ on parties like RTE and ITP. The CFI also held that while copyright entitled the copyright holder to reserve the exclusive right to reproduce the protected work, it was apparent that the right was being exercised in such ways so as to pursue an aim manifestly contrary to objectives of Article 86 of the Treaty Establishing the European Economic Community (EEC Treaty).<sup>64</sup> CFI noted that by reserving the exclusive right to reproduce their weekly listings, RTE and ITP were ‘preventing the emergence on the market of a new product, namely a general television magazine likely to compete with their own magazines’.<sup>65</sup> This, as per the CFI, ‘went beyond what was necessary to fulfill the essential function of the copyright’.<sup>66</sup>

Before the ECJ, ITP submitted that:

copyright owners ordinarily and naturally exercise their copyright in order to restrict competition with their own product by other products made using their copyright material, even on a derived market. That, it continues, is the essence of copyright. RTE further added that the owner of an intellectual property right is under no obligation to offer justification for his refusal to grant a license.<sup>67</sup>

The ECJ found the conduct abusive, owing to the following reasons:

- (i) Preventing appearance of new product: Both RTE and ITP’s refusal to provide basic information prevented the appearance of a new product for which there was potential consumer demand.

<sup>64</sup>EEC Treaty, art 86:

Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market insofar as it may affect trade between Member States.

Such abuse may, in particular, consist in:

(a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;

(b) limiting production, markets or technical development to the prejudice of consumers;

(c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

<sup>65</sup>*Radio TelefisEireann* (n 63), para 29.

<sup>66</sup>*ibid*, para 30.

<sup>67</sup>*ibid*, para 39.

- (ii) No justification: There was no justification for such refusal either in the activity of television broadcasting or in that of publishing television magazines.
- (iii) Excluded all competition: The parties, by their conduct reserved to themselves the secondary market of weekly television guides by excluding all competition on that market.
- (iv) Indispensability: The parties denied basic information which is the raw material indispensable for the compilation of such a guide.

It should be noted that the ECJ did not, at any stage, anywhere in its judgement expound the EFD or list its constituent elements.

- (c) *Bronner case*<sup>68</sup>: In this case, a regional court in Vienna, referred to the ECJ for a preliminary ruling on the interpretation of Article 86 of the EEC Treaty. The facts involved Oscar Bronner, a company editing, publishing, manufacturing and distributing the daily newspaper *Der Standard*. Mediaprint published more prominent newspapers and has established a nationwide home-delivery scheme for the distribution of its newspapers. Oscar Bronner sought an order mandating Mediaprint to include its *Der Standard* newspaper in its home delivery scheme because its own mode of distribution (which involved postal delivery) did not take place until late morning whereas Mediaprint's home delivery scheme delivered in the early hours of the morning. Oscar Bronner referred to the EFD, as established in the *Magill* case and made it clear that by owning the only 'economically viable' home-delivery scheme in Austria, Mediaprint is obliged to allow access to the scheme by competing products.<sup>69</sup>

Mediaprint objected first by submitting that 'undertakings in a dominant position are also entitled to the freedom to arrange their own affairs, in that they are normally entitled to decide freely to whom they wish to offer their services and, in particular, to whom they wish to allow access to their own facilities.'<sup>70</sup> Mediaprint also submitted that 'all competition' was not eliminated as Bronner had other distribution systems which could enable it to sell its papers in Austria.<sup>71</sup>

The ECJ proceeded by observing that it would be necessary:

for the Magill judgement to be effectively relied upon in order to plead the existence of an abuse....not only that the refusal of service comprised in home-delivery be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and that such refusal be incapable of being objectively justified, but also that the

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<sup>68</sup>Case C-7/97 *Oscar Bronner v MediaprintZeitung* (1998) Court of Justice of the European Union ECLI:EU:C:1998:569.

<sup>69</sup>ibid, para 24.

<sup>70</sup>ibid, para 26.

<sup>71</sup>ibid, para 27.

service in itself is indispensable to carrying on that person's business, inasmuch as there is not actual or potential substitute in existence for that home-delivery scheme.<sup>72</sup>

The ECJ went on to observe that there were other methods of distributing newspapers even though they may be less advantageous and that it is not enough to argue that such other systems are not economically viable by reason of small circulation. Accordingly, the ECJ found the conduct of Mediaprint to not constitute an abuse of its dominant position.<sup>73</sup>

(d) *IMS Health* case<sup>74</sup>: Both IMS and NDC were entities that were engaged in tracking the sales of pharmaceutical and healthcare products. IMS provided data on regional sales of pharmaceutical products in Germany to pharmaceutical laboratories by using a brick structure.<sup>75</sup> The IMS brick structure comprised of 1,860 bricks or a derived structure consisting of 2,847 bricks. NDC acquired a company PII that had also decided to use brick structures of 1,860 or 3,000 bricks, 'very similar to those used by IMS'.<sup>76</sup> An interlocutory order was granted prohibiting PII from using the aforesaid brick structure. NDC complained to the EC and eventually, the EC adopted an interim measure ordering IMS to grant a license to all undertakings present on the market for provision of German regional sales data. The EC held that the IMS brick structure had become the industry standard and refusal of access without any objective justification would eliminate all competition. Eventually the EC order was withdrawn since there was no urgency anymore in imposing interim measures. Therefore, the court before whom the main proceedings (from where the issue originated) were ongoing had requested the ECJ's preliminary ruling regarding interpretation of a key question, namely, whether the refusal to grant a license to use a brick structure constitutes an abuse of dominant position.

IMS argued, *inter alia*, that the refusal to grant a license must prevent the emergence of a new product (along with other factors which need to be proved). Since NDC intends to use the same brick structure as IMS, it cannot be said to introduce a new product on the market and was instead, supplying the same product in the same market.<sup>77</sup> NDC however claimed that it is not essential for there to be two distinct markets.<sup>78</sup> However, the ECJ observed that as per the *Bronner* judgement, it was held that it was relevant to distinguish an upstream market

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<sup>72</sup>ibid, para 41.

<sup>73</sup>ibid, para 45.

<sup>74</sup>Case C-418/01 *IMS Health v NDC Health* (2004) Court of Justice of the European Union ECLI: EU:C:2004:257.

<sup>75</sup>A brick structure is a data collection system which segregates geographical regions into 'bricks' comprising of few pharmacies each. The structure is used to track and subsequently, used by pharmaceutical companies to analyse their sales strategies.

<sup>76</sup>*IMS Health* (n 74).

<sup>77</sup>ibid, para 32.

<sup>78</sup>ibid, para 33.

constituted by the product in question and a downstream market, on which the product in question would be used to create a derivate product. Therefore, the ECJ held that the refusal to grant a license may be abusive only where the entity requesting the license does not reduce itself to merely duplicating the product in question, ‘but intends to produce new goods, not offered by the owner of the right and for which there is potential consumer demand’.<sup>79</sup>

(e) *Microsoft case*<sup>80</sup>: The EC found Microsoft guilty of abusing its dominant position with respect to two types of conduct. The first abusive conduct related to Microsoft’s refusal to supply its competitors with ‘interoperability information’ which could be used for the purpose of developing and distributing products competing with Microsoft’s own products on the work group server operating systems market. The second abusive conduct pertained to Microsoft making its operating system available contingent on the simultaneous acquisition of the Windows Media Player software.

For this chapter, authors have focussed only on the first abuse, namely, Microsoft’s refusal to supply interoperability information to its rivals for developing new products. This is being done since the second abuse concerns a practice commonly known as ‘bundling’ (where products are not available on a standalone basis and are instead sold only in a bundle with each other). The present imbroglio with mobile wallets and interoperability does not involve the issue of bundling.

Microsoft started by invoking an assortment of intellectual property rights (IPRs) for protecting its interoperability information protocol such as those granted under patent law, copyright law and trade secrets law. The CFI remarked that the central issue in this case would be whether the conditions under which a dominant entity may be required to grant a license to its intellectual property (IP) are satisfied in the instant case. Below is a brief summary of the court’s findings on the four ingredients of the EFD:

(i) Indispensability: Microsoft submitted that a particular technology could not be indispensable if it was ‘economically viable’ for the competitors to develop and market their products without access to that technology. Further, Microsoft claimed that the EC failed to show a causal link between the non-availability interoperability protocol and the claimed inability of the competitors to compete.<sup>81</sup> The EC replied by stating that the Microsoft’s view on indispensability would tantamount to an ‘inefficient interoperability solution’ that would allow competitors to achieve only *de minimis* market penetration whereas what is needed was an ‘economically viable source’.<sup>82</sup>

<sup>79</sup>ibid, para 49.

<sup>80</sup>Case T-201/04 *Microsoft v Commission* (2017) Judgement of the Court of First Instance ECLI:EU:T:2007:289.

<sup>81</sup>ibid, para 341.

<sup>82</sup>ibid, para 355.

The CFI rejected Microsoft's submissions and was able to establish a causal link between the denial of the interoperability protocol and the receding market share of its competitors. However, the CFI also held that indispensability also required that the degree of interoperability should be such that 'non-Microsoft work group server operating systems must be capable of interoperating with the Windows domain architecture on an equal footing with Windows work group server operating systems if they were to be marketed viably on the market.'<sup>83</sup>

- (ii) Elimination of competition: Microsoft submitted that the EC referred to a 'mere risk of elimination of competition in the market', when the refusal in question should instead be likely to eliminate all competition. Therefore, the standard adopted, as per Microsoft, should be 'something close to certainty'.<sup>84</sup> The CFI however, held as follows:

Nor is it necessary to demonstrate that all competition on the market would be eliminated. What matters, for the purpose of establishing an infringement of Article 82 EC, is that the refusal at issue is liable to, or is likely to, eliminate all effective competition on the market. It must be made clear that the fact that the competitors of the dominant undertaking retain a marginal presence in certain niches on the market cannot suffice to substantiate the existence of such competition.<sup>85</sup> (emphasis added)

Therefore, what was required to be demonstrated was not the elimination of 'all competition' but only 'all effective competition'.

- (iii) New product: Microsoft submitted that the EC order failed to point out any new product that would be developed as a result of providing the interoperability protocol. All that would be accomplished is the creation by the competitors of an enhanced version of Microsoft's own product. And that, it was claimed by Microsoft, amounts to merely an addition of a feature that cannot be viewed as the creation of a 'new product'.<sup>86</sup>

The CFI held that the appearance of a new product cannot be the only parameter to judge whether the refusal in question is abusive. Such abusive conduct may also be established by limiting technical development as well.<sup>87</sup> The CFI contemplated that the competitors would have no reason to imitate Microsoft's product since in order to 'maintain a profitable presence in the market', the competitors would have choice other than 'to differentiate their products from Microsoft's products with respect to certain parameters and certain features'.<sup>88</sup>

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<sup>83</sup>ibid, para 421.

<sup>84</sup>ibid, para 439.

<sup>85</sup>ibid, para 563.

<sup>86</sup>ibid, para 626.

<sup>87</sup>ibid, para 647.

<sup>88</sup>ibid, para 668.

- (iv) Objective Justification: Microsoft again invoked its IPRs as a justification for refusing to supply the protocol in question. In addition, Microsoft claimed that providing a license to the competitors would also have a negative impact on the incentives to innovate. The EC however, countered by saying that the ‘positive impact on the level of innovation in the whole industry outweighed the negative impact of the dominant undertaking’s incentives to innovate.’ The CFI concurred with the EC and held that it was normal practice in the industry for operators to disclose to third parties information that enables interoperability and such disclosure cannot have any negative impact on the incentives to innovate.<sup>89</sup> Accordingly, the CFI ruled that Microsoft had not shown any objective justification while refusing to disclose its interoperability protocol.

## **5.1 Essential Facilities Doctrine in India**

CCI’s prior jurisprudence on the issue of EFD is scant.<sup>90</sup> The NSE case had involved the issue of an essential facility.<sup>91</sup> Eventually the CCI did not rule on whether the Application Program Interface Code (APIC) was an essential facility.<sup>92</sup> Further, when the matter went on appeal to the erstwhile COMPAT, the COMPAT did not rule on the issue as the parties had reached a settlement on the APIC issue.<sup>93</sup>

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<sup>89</sup>ibid, para 702.

<sup>90</sup>*MCX Stock Exchange v National Stock Exchange* (2009) Competition Commission of India, Case No 13/2009; one of the issues that was raised by MCX-SE was the denial of a market watch facility that was offered by NSE.

<sup>91</sup>The CCI noted that ‘NSE had acquired a 26% stake in Omnesys which was a technology vendor providing software for financial and securities market. The stake was taken through DotEx a 100% subsidiary of NSE. DotEx/Omnesys created a new product known as ‘NOW’ which was intended to substitute software called ‘ODIN’ developed by FTIL (the promoters of MCX-SE). NSE simultaneously refused to share its Currency Derivatives segment Application Programme Interface Code (APIC) with FTIL thus disabling the users of ODIN from connecting to the market watch of NSE’s CD segment trade. APIC, it was argued by MCX-SE, was an essential facility to connect front end application of NOW with any other application such as ODIN, which constitutes the electronic trading platform of the stock exchanges’, ibid.

<sup>92</sup>But the CCI did rule that ‘normally, APIC should have been denied for all segments but this was not the case’, and the denial of this facility to MCX-SE smacked of anticompetitive intent. This, it would appear, seems to suggest that the Commission felt that the feasibility of providing the facility was not in doubt, ibid.

<sup>93</sup>The COMPAT held that ‘as regards exclusionary denial of integrated market watch facility, we need not express anything here .... in view of settlement of the concerned parties’, *The National Stock Exchange of India v Competition Commission of India* (2014) COMPAT, Appeal No 15 of 2011 with IA NoS 25/2011, 26/2011, 27/2011, 10/2012,27/2012.

However, when reference is made to other governmental reports, it becomes clear that EFD has been considered in the Indian context as well. For instance, a review of the Report of the Working Group on Competition Policy constituted by the erstwhile Planning Commission, exhibits traces of the EFD. The aforesaid report, in fact, considered the EFD as one of the guiding principles of a national competition policy.<sup>94</sup> Similarly, the Draft Competition Policy 2011 prepared by the Committee on National Competition Policy (that was constituted by the Ministry of Corporate Affairs) also saw to it that a national competition policy, when drafted, should also include ‘third party access to essential facilities’ as one of the principles.<sup>95</sup>

Therefore, the concept of ‘essential facilities’ does find mention in various governmental reports and is not altogether an alien concept to India’s competition law experts. However, it still lacks a legislative framework and any kind of decisional practice that would lay out the contours of how such doctrine is to be applied.

However, a recent CCI *prima facie* Order under Section 26(1) of the Competition Act 2002, appears to have veered close to recognizing the EFD. In *HPCL-Mittal Pipelines Limited (HMPL) v Gujarat Energy Transmission Corporation Limited (GETCO) and Ors.*<sup>96</sup>, the CCI found the conduct of GETCO and other Opposite Parties (OPs) as anticompetitive at *prima facie* level. The Informant, HMPL, had alleged that the denial of open access to electricity by the OPs to itself was not in consonance with the principle of open access that was envisioned under the Electricity Act 2003 (which sought to create an environment where the power generating companies could sell power to the highest bidder and consumers could buy power from the most economical source instead of purchasing power from the distribution licensee). Therefore, it was alleged that by denying HMPL the right to link to a distribution company of its choice, the OPs had, *inter alia*, denied market access to other distribution companies that may have been able to supply to HMPL, were it not for the refusal of the OPs to provide it with a no objection certificate (NOC) and permission to source power from other distribution companies. While the CCI refrained from using the term ‘EFD’ in its *prima facie* order, the essential conditions for the invocation of the doctrine appear to be there. Firstly, the NOC was indispensable as HMPL could not have itself constructed a power generation facility to source power from. Secondly, there would be a killing of ‘effective competition’ by the OPs since by refusing to provide the requisite permission, it would damage the commercial prospects of HMPL, which actually

<sup>94</sup>‘Control over essential facilities by dominant enterprises undermines competition by denying access to new entrants. Third party access to essential facilities on reasonable fair terms will ensure effective competition and, therefore, should be provided in law. However, what constitutes an essential facility may differ on a case to case basis’, Planning Commission, Government of India, ‘Report Of The Working Group on Competition Policy’ (February 2007), para 5.2.1 <[http://planningcommission.nic.in/aboutus/committee/wrkgrp11/wg11\\_cpolicy.pdf](http://planningcommission.nic.in/aboutus/committee/wrkgrp11/wg11_cpolicy.pdf)>.

<sup>95</sup>‘Draft National Competition Policy’ (2011), para 7.1 <[http://www.mca.gov.in/Ministry/pdf/Draft\\_National\\_Competition\\_Policy.pdf](http://www.mca.gov.in/Ministry/pdf/Draft_National_Competition_Policy.pdf)>.

<sup>96</sup>*HPCL v Gujarat Energy* (2017) Competition Commission of India, Case No 39 of 2017.

competed with OP two in the instant case (which was a wholly owned subsidiary of GETCO). Thirdly, the denial of permission by GETCO and other OPs would restrain the technical development of the product as well. Indeed, the CCI found that the OPs had violated Section 4(2)(b)(i) and limited technical development. Lastly, the Commission also found that there was no objective justification offered by the OPs in refusing an NOC or permission to HMPL since their grounds of network constraints were found to be illegitimate.

Notwithstanding the above case, the authors will briefly examine below how the mobile wallet companies may embark on securing the API of the interoperability protocol of UPI, should it be denied by the banks.

To highlight the same, each ingredient of the EFD will be discussed. Such discussion will be informed by jurisprudence of the EC/ECJ/CFI that had been underscored earlier. Further, the discussion will also take into account the potential pitfalls as well as opportunities arising from such jurisprudence from the perspective of mobile wallet companies, when invoking the EFD.

- (i) **Indispensability:** While the *Commercial Solvents* case had laid down the criteria that would have to be cumulatively satisfied to successfully invoke the EFD, it remained silent on how each ingredient was to be applied. The *Magill* case, on the other hand, is the first case that had attempted to explain, *inter alia*, how indispensability would be assessed. During its judgement, the ECJ was of the opinion that Magill, as a publisher of a weekly TV guide was in a position of ‘economic dependence’ on news channels such as RTE and ITP. However, it is debatable whether Magill could really be said to be dependent on those channels when they comprise only a tiny proportion of the total number of channels for which the guide would be published. Taking this argument further, can an applicant entity said to be economically dependent on a dominant entity when the item that is sought to be procured from the dominant entity would constitute only a fraction of the applicant entity’s revenues?

The *Bronner* case further narrowed the scope of how indispensability was to be construed. It effectively held that a facility is not indispensable if there are other methods to develop the facility available at the disposal of the applicant entity, even though if these methods are less advantageous and not economically viable.

The *Microsoft* case however, reversed the reasoning of the *Bronner* case. In the *Microsoft* case, the CFI has diluted the indispensability requirement defined in the earlier cases by insinuating that even though the applicant entity requesting the ‘essential facility’ may be able to create an interoperability protocol on its own, however, if the protocol so created was not marketable or commercially viable, then the enterprise could always fall back on the EFD to secure it from the entity holding the predominant interoperability protocol.

From the above, it appears that if the mobile wallet companies were to go by any measure of the indispensability requirement as defined over the years by the ECJ/CFI, it would have a strong argument to secure access to the API of the banks. Firstly, mobile wallets companies appear to be in a position of economic

dependence on the banks as the refusal by banks to provide the API could scuttle their chances to be truly interoperable with other mobile wallets and the banks. This would have a concomitant impact on their commercial viability, a key element when appraising indispensability, since the interoperability feature would not be there.

- (ii) Eliminate competition: The promising growth of mobile wallets (albeit it may have plateaued in terms of the value of transactions compared to UPI apps), even in the absence of interoperability, may prove at the very outset that a lack of interoperability would not kill all competition. However, given that the *Microsoft* case has effectively shifted the goalposts on what ‘competition’ means, it can still be asserted that mobile wallet companies would be able to satisfy this criterion as well. The *Microsoft* case saw the CFI ruling that the refusal to provide the essential facility does not have to result in hindering the emergence of all competition, but only all effective competition. In other words, even if the refusal does not prevent the applicant entity from being able to compete in some manner with the dominant entity, that alone would not disqualify the applicant entity from invoking the EFD.

Accordingly, one may argue that it is not a prerequisite for mobile wallet companies to show an irreversible decline of their business prospects if they were not to be provided with the interoperability protocol. Instead, the fact that a denial will blunt their ability to compete effectively with UPI apps will be sufficient reason to provide them with the claimed protocol.

- (iii) New Product: While the *IMS Health* case had categorically said that the creator of the new product must offer a product that is not offered by the owner of the right, the *Microsoft* case again, diluted what could be considered as a new product. In fact, the *Microsoft* case held that it is not even necessary for there to be a new product. It is sufficient if the refusal results in the limitation of technical development. The mobile wallet companies would face a hard time furnishing any meaningful evidence regarding the creation of a new product as most banks would also have a mobile wallet. However, the fact that a refusal would prevent the addition of new features into an existing mobile wallet would definitely fall within the purview of restricting technical development.
- (iv) Objective justification: While a refusal to provide an essential facility may be justified by some entities on grounds of scarcity of raw material, the same would not be a justifiable reason in the present case of mobile wallets. Since the supply of API is non-rivalrous in nature, (i.e., one mobile wallet’s use of the bank’s API does not come at the expense of any other mobile wallet or bank), it is feasible to supply it as it is readily available. The API is merely a tool for building a software, and stipulates how various software components interact with one another. The same is therefore a proprietary product that can be lent to more than one mobile wallet company at any given time.

## **5.2 Evaluation Under Section 4 of the Act**

Since the EFD is applicable only to dominant enterprises, it would have to be examined whether the conduct of banks would be that of a dominant entity under Section 4 of the Act.

- (i) Whether CCI has jurisdiction: This pertains to an issue of probable regulatory conflict of the CCI with the Copyright Board under the Copyright Act which has been discussed later in this chapter.
- (ii) Enterprise concerned: It appears that the relevant entity for the purposes of evaluating dominance would be a bank, since it is the bank that possesses the API. However, for the sake of a comprehensive academic analysis, authors have elaborated on the other side of the argument as well. Some may submit that it is the NPCI which is the relevant enterprise since it was the NPCI that had introduced the concept of UPI and also has a UPI app of its own—BHIM. Unlike other UPI apps that are connected or linked to a particular bank, BHIM was mandated to be integrated with the software applications of all banks that comprised the NPCI, thus giving it a unique status among other UPI apps.<sup>97</sup> However, it would appear that since the NPCI itself does not have any API to offer, there cannot be an issue of refusal or denial of providing API in the first place. Therefore, the definition of ‘enterprise’ is more likely to include only a bank. Since it is the bank which actually provides the API of the interoperability and therefore is in a position to refuse or deny access to such API, the appropriate enterprise for the purpose of the evaluation would appear to be the banks.
- (iii) Whether API is a good or service: Since the present case involves the issue of licensing the right to use the interoperability protocol, the question is whether the same can be regarded as a ‘good’ or ‘service’. It should however, be noted that Section 2(u) of the Act does define ‘service’ to include a ‘service of any description which is made available to potential users and includes the provision of services in connection with business of any industrial or commercial matters such as banking...’. Since the API in question has no utility unless it is provided to enable interoperability (and in most cases, the banks provide the API to third party UPI app developers to enable interoperability), it would fall within the purview of a ‘service which is made available to potential users...in connection....with banking’.
- (iv) Relevant market: As per Section 2(t) of the Act, the ‘relevant product market’ means all those products or services which are regarded as interchangeable or substitutable by the consumer, by reason of characteristics of the products or services, their prices and intended use. At first glance, one may be tempted to delineate the relevant market as the ‘provision of banking services’ considering that the issue in question involves banks. However,

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<sup>97</sup>Ramanathan (n 7).

since the contentious point here is the potential denial of the API by banks to mobile wallet companies, the relevant product market should instead be the ‘provision of API of the interoperability protocol by all banks to mobile wallets’. It should be pointed out here for the sake of a complete and informed analysis that the relevant product market cannot be limited to the provision of API of interoperability protocol by each bank. This is due to the fact that just as there is no limitation here on the owner of a primary product (a bank account) to switch to the secondary product (a UPI app) of another bank, similarly, each mobile wallet company has to secure just one API from a bank to secure interoperability. For instance, ICICI Bank can easily provide an API to a mobile wallet company that would make its mobile wallet interoperable with all other mobile wallets. Even though each API is unique in itself, the fact is that for a mobile wallet company, the choice of bank that actually provides the API would not matter. Therefore, the relevant market could be the ‘provision of API of the interoperability protocol by all banks to mobile wallets’. Alternatively, however, if a mobile wallet company chooses to tie up with a bank for offering certain banking services, like many UPI app developers have done, then the choice of the bank as the API provider would matter owing to each bank’s unique suite of banking services<sup>98</sup> and accordingly it may not be possible to contend that the relevant product market would comprise of provision of API of interoperability protocol of all banks.

- (v) Dominance: Each API is unique to the bank which provides it, but when taken collectively, no single bank could be said to be dominant in the relevant market. Since the concept of collective dominance has not been introduced under the Act, it may not be possible to invoke the essential facilities doctrine with no dominance being established. However, under the alternative definition of relevant product market provided above, it is possible that each bank is considered as dominant in the provision of its unique API to a mobile wallet company.

### **5.3 Possible Grounds for a Refusal by Banks**

Firstly, since the API is an internal program that is not available for sale in the open market, can antitrust authorities compel companies to divert what would otherwise be captive production (to be used for internal consumption)? In vertically integrated groups, it is common for the upstream arm to produce only internally for ‘captive

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<sup>98</sup>It should be remembered that any UPI app is, after all, an app that is tied to a particular bank. While the fact that each UPI app is platform agnostic is a great attraction, at the end of the day, a lot of users would also want to transact on that particular app owing to the bank (that has tied up with the app) offering some unique boutique of services.

use' by the downstream arm. The issue is whether such 'captive production' by the upstream arm should be included in product market or whether such product market should only include those products that are sold in the 'merchant market'. For instance, in *Pfizer/Hospira* (C-2015/03/255), when analyzing the possibility of vertical foreclosure due to Pfizer selling formulations and Hospira selling APIs (Active Pharmaceutical Ingredients), it was observed that Hospira was primarily utilizing the APIs for internal use and not for sale in the merchant market and therefore there was no possibility of foreclosure of input foreclosure as the API could not be considered an input. Similarly, in *Aditya Birla Chemicals/Grasim*, the combined market was calculated by excluding any production that was captively consumed. However, these are combination cases and the Commission may adopt a different approach when evaluating the same under the antitrust regime dealt with by Section 4.

Secondly, since the interoperability protocol API is likely protected as a trade secret or copyright, it may be difficult to secure access to it. The recent White Paper of the Committee on Experts on a Data Protection Framework for India also recognized that it may be difficult to compel businesses to provide access to their algorithms that are used to make automated decisions as this right to access is likely to be heavily limited owing to trade secrets of these businesses.<sup>99</sup>

Thirdly, it would appear natural that the courts will not second guess the value judgement or the business acumen of private enterprises.

Since this chapter is concerned with the interface between IP and antitrust law, it will now focus on the second ground of IP protection.

## 6 Intellectual Property Defense

Section 3(5)(i) of the Competition Act 2002 provides that nothing in Section 3 shall restrict the right of any person to restrain any infringement of, or to impose reasonable conditions, as may be necessary for protecting their IPRs. The CCI has dealt with the issue of IPRs in a few cases.

In the *FICCI Multiplex* case,<sup>100</sup> the first cartel case decided by the CCI, one of the arguments adopted by the arraigned parties before the CCI in order to justify not providing access of their films to multiplex owners was that 'no multiplex owner can demand that the film be released in a theatre let alone dictate the commercial terms on which such film must be released.'<sup>101</sup> This, it was argued, was due to the

<sup>99</sup>White Paper of The Committee of Experts on a Data Protection Framework for India' (2017) <[http://meity.gov.in/writereaddata/files/white\\_paper\\_on\\_data\\_protection\\_in\\_india\\_171127\\_final\\_v2.pdf](http://meity.gov.in/writereaddata/files/white_paper_on_data_protection_in_india_171127_final_v2.pdf)>.

<sup>100</sup>*FICCI—Multiplex Association v United Producers* (2009) Competition Commission of India, Case No 01 OF 2009.

<sup>101</sup>ibid, para 23.11.

copyright that subsisted in the films which gave them the right to decide on what terms to provide the films. The CCI held that copyright is a statutory right and not an absolute right and would be subject to the rigors of the Competition Act 2002. In the *Shamsher Kataria* case<sup>102</sup> on the other hand, the CCI emphasized that the party in question may ‘impose reasonable conditions, as may be necessary for protection any of his rights’. In the view of the CCI, the concept of protection of an IPR was qualified by the word ‘necessary’. So the key question for consideration by the CCI in such cases was viewed to be: whether the IPR holder can protect his IPR, even if such restriction was not present. In the instant case, the CCI held that the restrictions that had been imposed by certain car manufacturers on the sale of their spare parts to everyone except their own subsidiaries, was beyond the scope of what was considered as necessary in order to protect the IPR that was vested therein.

However, it is pertinent to note that the IP defense is only available to agreements that are coming under the purview of Section 3 of the Act. In other words, there is no such defense available for abuse of dominance. However, since the EFD does not squarely fall under any of the provisions of the abuses listed under Section 4 of the Act, perhaps IP protection can be invoked. In such a case, it might come down to an issue of conflict between different statutes, i.e. The Copyright Act 1957 and the Competition Act 2002.

In this regard, it is noted that the Copyright Act is a statute that deals with consolidation of the law relating to copyright in India, but is not a comprehensive piece of legislation in that it does not cover anticompetitive conduct that may result (as a result of copyright subsisting in any class of work). Accordingly, the aims and objectives of the two legislations are manifestly different. Also, unlike the Patents Act, (which contains provisions to redress abusive conduct when a patentee refuses to grant a license on reasonable terms), the Copyright Act only provides for a compulsory license in case of works withheld from public.<sup>103</sup> At this juncture, it is relevant to point out that the Copyright Act would be viewed as a ‘special’ statute *vis-à-vis* the Competition Act (owing to the fact that it is a self-contained code) which would give it primacy in case of a conflict between the two. However, the two statutes do not have to be construed in such a manner, especially, since both do not have absolute *non-obstante* clauses. While the Competition Act does provide that the provisions of the Act shall have overriding effect notwithstanding anything contrary contained in other law, that provision is tempered by Section 62 which provides as follows: ‘The provisions of this Act shall be in addition to, and not in derogation of, the provisions of any other law for the time being in force.’

Therefore, the provisions of the Copyright Act and the Competition Act have to be construed harmoniously and it cannot be said that either legislation supersedes the other. In *Telefonaktiebolaget LM Ericsson v Competition Commission of India*

<sup>102</sup>ibid.

<sup>103</sup>Copyright Act 1957, s 31.

*and Another*,<sup>104</sup> the Delhi High Court was of the opinion that the two enactments, viz. The Patents Act 1970 and the Competition Act 2002 can be construed harmoniously as the Controller of Patents can be mandated to take into account ‘any finding of anticompetitive practice, that is returned after a judicial or administrative process including by the CCI under the Competition Act, while settling the terms of a compulsory license issued to remedy such practice.’<sup>105</sup>

Accordingly, it appears that the Commission can indeed apply the EFD in a case of refusal to provide interoperability protocol to mobile wallet companies.

## 7 Conclusion

After a discussion on UPI (and its much vaunted interoperability benefit), the validity of the impugned RBI Master Direction, the parallels between the EC and CCI, and a threadbare discussion on the EFD in the EC, a definitive conclusion can be reached. EFD can be implemented when confronted with the protective cover that is provided by IPRs. The contravention of the Competition Act under Section 4 can be established under many potential heads listed in Section 4. For instance —‘restricting technical development’ under Section 4(2)(b)(ii) by preventing the addition of a new feature in mobile wallets, ‘denial of market access’ under Section 4(2)(c) by banks by preventing the mobile wallet companies from accessing the interoperability protocol that is available to others and ‘leveraging’ under Section 4(2)(e) by banks trying to secure the downstream market of mobile wallets for themselves to the exclusion of the existing players.

**Disclosure:** The authors wish to point out that the views expressed in this chapter are their own and do not necessarily reflect the policy or position of the Competition Commission of India.

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<sup>104</sup>*Telefonaktiebolaget LM Ericsson v CCI* (2016) Delhi High Court, WP(C) 464/2014 and CM Nos 911/2014 & 915/2014.

<sup>105</sup>*ibid.*

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# **Chapter 14**

## **Towards a Transaction Cost Approach to the Essential Facilities Doctrine**



**Yugank Goyal, Padmanabha Ramanujam and Anmol Patel**

### **1 Introduction**

Most problems facing a policy maker involve tradeoffs. She chooses legal tools to tilt the balance in favor of one action against the other. The essential facility doctrine (EFD) is one such tool. However, before utilizing the tool, one has to decide which side needs tipping. This chapter discusses how to make that decision, with regard to EFD (and specifically with respect to intellectual property rights (IPRs)). Borrowing from the ideas that have emerged in US and Europe, the chapter proposes specific suggestions for India, which, without loss of generality, can be applied to most other developing nations as well. The doctrine is used to address the anticompetitive behavior of a firm with market power, which owns ‘an essential facility’ and refusing to license it to competitors or new entrants. Using the doctrine, government may mandate the firm to share the facility. The issues addressed here are significant and with debates on this issue gaining momentum in developing countries, there is a need for rigorous analysis.

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Study of EFD has had its own share of conflicts. It has attracted dissimilar sentiments from various scholars. Areeda famously called it ‘an epithet in need of limiting principles,’<sup>1</sup> and many others have been critical of its scope.<sup>2</sup> Yet host of scholars defend its importance in relevant policy designs.<sup>3</sup> Given that the doctrine advocates granting access to competitors, it has generated significant debates in academia, for both its desirability and applicability.<sup>4</sup>

From economic consideration, the issue is complex. It usually applies to firms, which are vertically integrated, and perhaps natural monopolists in one market

<sup>1</sup>Phillip Areeda, ‘Essential Facilities: An Epithet in Need of Limiting Principles’ (1990) 58(4) Antitrust LJ 841.

<sup>2</sup>See, eg, David Reiffen and Andre N Klett, ‘Terminal Railroad Revisited: Foreclosure of an Essential Facility or Simple Horizontal Monopoly’ (1990) 33(2) JL & Econ 419; Keith N Hylton, ‘Economic Rents and Essential Facilities’ (1991) 1991(3) BYU L Rev 1243; Abbott B Lipsky, Jr and J Gregory Sidak, ‘Essential Facilities’ (1999) 51(5) Stan L Rev 1187; Herbert J Hovenkamp, ‘Unilateral Refusals to Deal, Vertical Integration, and the Essential Facility Doctrine’ (2008) University of Iowa Legal Studies Research Paper No 08–31 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1144675](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1144675)>; Steven Anderman, ‘The epithet that dares not speak its name: the essential facilities concept in Article 82 EC and IPRs after the Microsoft case’ in Ariel Ezrachi (ed), *Article 82 EC: Reflections on Its Recent Evolution* (Hart Publishing 2009) 87–98.

<sup>3</sup>See, eg, Robert Pitofsky and Donna Patterson and Jonathan Hooks, ‘The Essential Facilities Doctrine under US Antitrust Law’ (2002) 70(2) Antitrust LJ 443; Spencer Weber Waller, ‘Areeda, Epithets, and Essential Facilities’ (2008) 2008(2) Wis L Rev 359; Brett Frischmann and Spencer Weber Waller, ‘Revitalizing Essential Facilities’ (2008) 75(1) Antitrust LJ 1; Marina Lao, ‘Networks, Access, and Essential Facilities: From Terminal Railroad to Microsoft’ (2009) 62(2) SMU L Rev 557.

<sup>4</sup>Michael Boudin, ‘Antitrust Doctrine and the Sway of Metaphor’ (1986) 75(2) Geo L J 395; Gregory J Werden, ‘The Law and Economics of the Essential Facility Doctrine’ (1987) 32(2) St Louis U LJ 433; James R Ratner, ‘Should There be an Essential Facility Doctrine?’ (1988) 21(2) UC Davis L Rev 327; David J Gerber, ‘Rethinking the Monopolist’s Duty to Deal: A Legal and Economic Critique of the Doctrine of Essential Facilities’ (1988) 74(6) Va L Rev 1069, with Daniel E Troy, ‘Unclogging the Bottleneck: A New Essential Facility Doctrine’ (1983) 83(2) Colum L Rev 441; Phillip Areeda, ‘Essential Facilities: An Epithet in Need of Limiting Principles’ (1990) 58(4) Antitrust LJ 841; Keith N Hylton, ‘Economic Rents and Essential Facilities’ (1991) 1991(3) BYU L Rev 1243; David McGowan, ‘Regulating Competition in the Information Age: Computer Software as an Essential Facility under the Sherman Act’ (1995) 18(4) Hastings Comm & Ent LJ 771; Richard J Gilbert and Carl Shapiro, ‘An Economic Analysis of Unilateral Refusals to License Intellectual Property’ (1996) 93 Proceedings of the National Academy of Sciences 12,749; Allen Kezsbom and Allen V Goldman, ‘No Shortcut to Antitrust Analysis: The Twisted Journey of the Essential Facilities Doctrine’ (1996) 1 Colum Bus L Rev 1; Abbott B Lipsky, Jr and J Gregory Sidak, ‘Essential Facilities’ (1999) 51(5) Stan L Rev 1187; Robert Pitofsky and Donna Patterson D and Jonathan Hooks, ‘The Essential Facilities Doctrine under US Antitrust Law’ (2002) 70(2) Antitrust LJ 443; Glen O Robinson, ‘On Refusing to Deal with Rivals’ (2002) 87(5) Cornell L Rev 1177; Paul D Marquardt and Mak Leddy, ‘The Essential Facilities Doctrine and Intellectual Property Rights: A Response to Pitofsky, Patterson, and Hooks’ (2003) 70(3) Antitrust LJ 847; Lawrence A Sullivan and Warren S Grimes, *The Law Of Antitrust: An Integrated Handbook* (2d edn, Thomson West 2006) 124–31; Marina Lao, ‘Networks, Access, and Essential Facilities: From Terminal Railroad to Microsoft’ (2009) 62(2) SMU L Rev 557.

attempting to refuse in providing a monopolised input to a rival in a related competitive market. While at one level, their refusal is justified in preventing efficiency losses, free-riding tendencies by rivals, double marginalization problem and ensuring that there are incentives to invest/innovate<sup>5</sup>; at another level, such denials have potential to thrust anticompetitive effects in the market.<sup>6</sup> Chicago school thinkers are primary sources for benign academic view of EFD. They propose a ‘single monopoly profit theorem,’ according to which, if the products are used in fixed proportion, then a monopolist in one market cannot increase its profits in an adjacent market through extension.<sup>7</sup> In some ways, the approach proposes that such extensions are driven by efficiency considerations and therefore hardly anti-competitive.<sup>8</sup> However, recent scholarship contends that Chicago School’s thinking went too far, grounded on unrealistic assumptions, because neither products are necessarily used in fixed proportions, nor the static efficiency merits such a short-term view.<sup>9</sup> The denial for sharing the services could be motivated by rising rival’s costs and in short-term, there are no substitutes for essential facilities.<sup>10</sup> Even Areeda, in his famous critique, accepted the economic value of the doctrine in under certain circumstances—for instance, he agreed with court’s decisions in *MCI* and *Otter Trail* cases because of the natural monopoly of the issue.<sup>11</sup>

<sup>5</sup>See Michael H Riordan and Steven C Salop, ‘Evaluating Vertical Mergers: A Post-Chicago Approach’ (1995) 63(2) *Antitrust LJ* 513.

<sup>6</sup>See *ibid* 519 (‘Vertical mergers can lead to exclusionary effects by increasing rivals’ costs of doing business. This may involve raising their input costs by foreclosing their access to important inputs or foreclosing their access to a sufficient consumer base.’).

<sup>7</sup>See, eg, Robert H Bork, *Book Review* (1978) *The Antitrust Paradox: A Policy at War with Itself*; Richard A Posner, ‘The Chicago School of Antitrust Analysis’ (1979) 127(4) *U Pa L Rev* 925:

The tie-in analysis, for instance, was extended to vertical integration in general. To illustrate, it makes no sense for a monopoly producer to take over distribution in order to earn monopoly profits at the distribution as well as the manufacturing level. The product and its distribution are complements, and an increase in the price of distribution will reduce the demand for the product. Assuming that the product and its distribution are sold in fixed proportions, the conclusion is reached that vertical integration must be motivated by a desire for efficiency rather than for monopoly.

<sup>8</sup>See Posner, *ibid* 927.

<sup>9</sup>See Einer Elhauge, ‘Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory’ (2009) 123(2) *Harv L Rev* 397.

<sup>10</sup>See Thomas G Krattenmaker and Steven C Salop, ‘Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power over Price’ (1986) 96(2) *Yale LJ* 209, 234.

<sup>11</sup>Areeda (n 1) 845–848. *MCI Communications v American Telephone & Telegraph Co* 7th Circuit 708 F2d 1081, cert denied 464 US 891 (1983) and *Otter Tail Power Co v United States* (1973) 410 US 366.

Perhaps the pivot over which EFD cases revolve is to decide when the shared use becomes essential. Further, questions like whether in denial of the license, is there a threat to competition, and how to draw the guiding principles which help identify the exceptional circumstances that may justify the competition authority's intervention, without undermining the objective justifications by a dominant undertaking in refusing to allow such access. The legislative design in Europe, which refers to 'refusal to deal' cases are dealt as exclusionary abuse of dominance, under Article 82, EC Treaty establishing the European Community (hereinafter, Article 82 EC). Section 4 of the Competition Act 2002<sup>12</sup> and Section 2 of the Sherman Act 1890 are the corresponding provisions under Indian law and US law respectively. Needless to mention, Competition Act 2002 is nascent and is yet to evolve in matters involving abuse of dominance.

The rest of the chapter is divided as follows: Part two illustrates the evolution of the doctrine through last century, in the US and the EU. It examines the case law driven jurisprudence and shows the trajectory of the attitude of the judiciary in both regions. This part serves to give an account of the path dependency of the doctrine and allay the surprises that may emerge from a time-restricted view of the doctrine. Part three compares Article 82 EC and Section 2 of Sherman Act in order to understand the (differing) EU and US approaches to encouraging competition. This chapter will carve out the principles on which Indian approach should (or should not) be based. Part four delves into how the doctrine has been invoked in India and in Part five, criticizes its present scope and design. Part six proposes that India needs a proactive application of the doctrine, which needs to be modeled on EU's line. To support the proposal, this part builds an analytical argument, examining EFD in alternative theoretical set-ups. Authors analogise EFD as a legal institution with liability rule, which intervenes in a property framework. Drawing from the famous Calabresi and Melamed paper<sup>13</sup> this chapter shows how EFD could be located in this scholarship. This chapter utilizes the concept of transaction cost from the perspective of bargaining power between transacting parties and investigate its variation in different scenarios that produce (dis)incentives to refusing to license. Authors conclude that India needs to adopt expansive view of the doctrine particularly by its competition authorities because Indian IPRs regime is weak, which exhibits high transaction costs and therefore requires liability rule of EFD. Part seven concludes, mainly recognizing the limitations of the proposed model.

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<sup>12</sup>The Competition Act 2002, No 12 of 2003, as amended by The Competition (Amendment) Act 2007 (Competition Act 2002), s 4.

<sup>13</sup>Guido Calabresi and A Douglas Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85(6) Harv L Rev 1089.

## 2 Historical Overview

It can fairly be said that ‘refusal to deal’ under competition law is a manifestation of the ‘freedom of contract’ of contracting parties,<sup>14</sup> which was the essence of freedom from undue restraint on the right to contract.<sup>15</sup> Clauses of contract not to compete received considerable judicial attention in the 1880s in US just as they do today.<sup>16</sup> It may at first seem that freedom of contract would support enforcement of these agreements because parties ought to be able to set the terms of their contracts.<sup>17</sup> However, enforcement of these contracts can prevent formation of many other contracts.<sup>18</sup> It could, therefore, be argued that a court may actually increase the level of contract activity by refusing to enforce such contracts, as is the case with some ‘restraint of trade’ contracts and this would be an increase in the freedom of contract under some connotations of that term.<sup>19</sup>

### 2.1 Doctrine’s Origin in the US

As largely driven from American judgements, the doctrine is usually seen to have originated in US Supreme Court’s 1912 *Terminal Railroad*<sup>20</sup> decision, in which denial of third party usage of railroad bridges to St. Louis, owned and maintained by the defendant was challenged. The court opined that ‘the inherent conditions are such as to prohibit any other reasonable means of entering the city, the combination of every such facility under the exclusive ownership and control of less than all of the companies under compulsion to use them violates<sup>21</sup> Section 1 and Section 2 of the Sherman Act. Note that the defendant here was an Association that comprised of fourteen railroads serving St. Louis, and therefore invoked a strong sense of competition concerns. However, the Supreme Court did not agree to prosecutor’s (government’s) contention to dissolve the Association and proposed alternate institutional safeguards.<sup>22</sup> The idea of invoking antitrust concerns was logical, but

<sup>14</sup>Albeit the contrary was also believed for some time as is evident from old scholarship. See, eg, Joseph A Joyce, *Treatise on Monopolies and Unlawful Combinations or Restraints: Embracing Every Contract, Combination in the Form of Trust, Pool or Otherwise in Restraint of Trade or Commerce* (New York, Banks 1911).

<sup>15</sup>W W Thornton, *Treatise on Combinations in Restraint of Trade* (W H Anderson Company 1928).

<sup>16</sup>Pettit M, ‘Freedom, Freedom of Contract, and the Rise and Fall’ (1999) 79(2) BU L Rev 263.

<sup>17</sup>ibid.

<sup>18</sup>ibid.

<sup>19</sup>ibid.

<sup>20</sup>*United States v Terminal R.R. Ass'n of St. Louis* (1912) 224 US 383, 409.

<sup>21</sup>ibid 409.

<sup>22</sup>ibid 409–411.

there was no explicit mention of the doctrine, and the courts had differing viewpoints on how strictly they want to come out on monopolies.<sup>23</sup> Comparable reliefs were granted by the US Supreme Court in subsequent years, solidifying the existence of doctrine.

In *Associated Press*<sup>24</sup> (AP) case, where AP had prohibited member newspapers to provide any news to nonmember organizations, the court held AP's practice as an unreasonable restraint of trade violating Section 1 of Sherman Act, even though there was no monopolization that AP exhibited.<sup>25</sup> The court's view was that AP's bylaws served 'seriously to limit the opportunity of any new paper to enter', and that its services 'give many newspapers a competitive advantage over their rivals.'<sup>26</sup> In both these influential cases, there was an element of unfairness rather than fear of market power. Yet, the essentiality of goods/services was pivotal in both the cases. Many cases provide precedents to the similar reasoning: for instance, *Eastern States Lumber Dealers' Association v United States*<sup>27</sup> and *Klor's, Inc. v Broadway-Hale Stores, Inc.*<sup>28</sup> Of particular interest is *Silver v NYSE*<sup>29</sup> where the court held the Exchange's decision to terminate two brokers' direct wire connection was violating Section 1 of Sherman Act, holding that 'valuable service germane to petitioner's business and important to their effective competition with others was withheld from them by collective action.'<sup>30</sup>

The courts have been cautious however, by avoiding blanket mandates to declare all group-boycotts illegal. For instance, in *Northwest Wholesale Stationers, Inc. v Pacific Stationery and Printing Co*,<sup>31</sup> the court expressly held that, 'Unless the cooperative possesses market power or exclusive access to an element essential to effective competition, the conclusion that expulsion is virtually always likely to have an anticompetitive effect is not warranted.... Absent such a showing with respect to a cooperative buying arrangement, courts should apply a rule-of-reason analysis.'<sup>32</sup> Notice that not all cases had issues pertaining to competition but definitely with essential goods/services, unilateral refusals to deal with which was imposing severe fairness considerations.

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<sup>23</sup>See, for instance, *United States v New England Fish Exch.*, 258 F 732 (D Mass 1919), which was somewhat similar to Terminal Railroad case, but the court declared illegal the fish exchange made by comprising of all local fish wholesalers.

<sup>24</sup>*Associated Press v United States* (1945) 326 US 1, 8, 21.

<sup>25</sup>ibid 11–12.

<sup>26</sup>ibid 13, 17.

<sup>27</sup>*Eastern States Lumber Dealers' Association v United States* (1914) 234 US 600.

<sup>28</sup>*Klor's, Inc. v Broadway-Hale Stores, Inc.* (1959) 359 US 207.

<sup>29</sup>*Silver v NYSE* (1963) 373 US 341.

<sup>30</sup>ibid 349.

<sup>31</sup>*Northwest Wholesale Stationers, Inc. v Pacific Stationery and Printing Co* (1985) 472 US 284.

<sup>32</sup>ibid 296–297.

However, a clearer jurisprudence evolved from interpreting Section 2 of the Sherman Act,<sup>33</sup> where one party's alleged control of some 'essential facility' is enough to invoke the doctrine. Consider *United States v Griffith*,<sup>34</sup> which invalidated the monopoly power of theatres in one geographical market to use their positions and occupy monopoly power in another market. The court stated that 'the use of monopoly power, however lawfully acquired, to foreclose competition, is unlawful.'<sup>35</sup> Note that in both cases, courts were trying to prevent monopoly power to beget further monopoly power. This is indeed the case in owning essential rival goods/services, sole access to which can greatly enhance monopoly power of firms that own them. After *Otter Trail*<sup>36</sup> and *Aspen Highlands*<sup>37</sup> cases, the doctrine was etched in legal memory to be invoked frequently in subsequent cases. In the former case, Otter Trail, which was an integrated electric utility company attempted to prevent entry of distribution players in the business by refusing to sell or transmit wholesale power to them. Even though not specifically articulated in the EFD context, the court held the conduct unlawful because the '[u]se of monopoly power 'to destroy threatened competition' is a violation of the 'attempt to monopolise' clause of Section 2 of the Sherman Act'<sup>38</sup> and therefore paved way for broader understanding of EFD. Similarly in *Aspen Highlands* case, the court declared the refusal to access the three skiing mountains by the owners to the owner of a fourth mountain who wanted to offer a joint lift ticket in cooperation with the three, anticompetitive and therefore unlawful.<sup>39</sup> Interestingly, that even in *Aspen Highlands*, the court never explicitly mentioned EFD. On the contrary, it went to suggest that it was 'unnecessary to consider the possible relevance of the 'essential facilities' doctrine...'.<sup>40</sup> This view is noteworthy for another reason—many firms engage in unilateral actions everyday, both to accept and refuse and there is no reason to believe that all such actions warrant similar judicial reactions.<sup>41</sup> Yet, the common binding factor is that of how refusing access to essential facility could result in potential anticompetitive effects. Scholars have located the doctrinal original in cases including this one and these precedents structure how judicial viewpoints are shaped in time.

<sup>33</sup>US Sherman Act 1890, s 2.

<sup>34</sup>*United States v Griffith* (1948) 334 US 100.

<sup>35</sup>ibid 107. The reasoning is very similar to *Berkey Photo, Inc v Eastman Kodak Co* (1979) 2nd Circuit 603 F2d 263, cert denied 444 US 1093 (1980).

<sup>36</sup>*Otter Tail* (n 11).

<sup>37</sup>*Aspen Highlands Skiing Corp v Aspen Skiing Co* (1984) 10th Circuit, 738 F2d 1509.

<sup>38</sup>ibid 377.

<sup>39</sup>ibid 610–611.

<sup>40</sup>ibid 611.

<sup>41</sup>See for instance, Phillip Areeda, 'Essential Facilities: An Epithet in Need of Limiting Principles' (1990) 58(4) Antitrust LJ 841, 844. See also Philip E Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and their Applications* (3rd edn, Wolters Kluwer Law & Business 1995), which shows that there is no general conclusion from Supreme Court's pronouncements that firms should always make its facilities available.

Therefore, which cases will strictly fall under EFD could be disputable. Werden<sup>42</sup> makes a logical categorization and other than *Terminal Railroad* and *Otter Trail*, suggests that two other major cases be considered under the category of strictly EFD: *Gamco, Inc. v Providence Fruit and Produce Building, Inc.*<sup>43</sup> and *Hecht v Pro-Football, Inc.*<sup>44</sup> but the latter deserves special mention because it was the first case to expressly use the term, ‘essential facility doctrine.’ In *Hecht*, a covenant prohibiting leasing the stadium to any other professional football team was challenged and the court opined, ‘essential facility doctrine would also support an allegation that the Redskins’ refusal to waive the restrictive covenant constituted illegal monopolization under section 2’.<sup>45</sup> The definitional impact of this judgement for EFD was also recognised by Sixth Circuit in 1979.<sup>46</sup>

Perhaps the most significant case that rests entirely on EFD and proposes a systematic test to establish liability for the doctrine is the famous *MCI* case.<sup>47</sup> The case involved AT&T refusing access to its local Bell facilities to MCI, which the latter challenged. The court of appeals sustained the jury opinion that AT&T’s action constituted violation of Section 2 of Sherman Act. The court stated that:

the case law sets forth four elements necessary to establish liability under the essential facilities doctrine: (1) control of the essential facility by a monopolist; (2) a competitor’s inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.<sup>48</sup>

This four-part test was subsequently adopted by the court in *Aspen Highlands* case.<sup>49</sup> The doctrine has subsequently been extensively applied in cases involving

<sup>42</sup>Gregory J Werden, ‘The Law and Economics of the Essential Facility Doctrine’ (1987) 32(2) St Louis U LJ 433.

<sup>43</sup>*Gamco, Inc. v Providence Fruit and Produce Building, Inc.* 1st Circuit, 194 F2d 484, cert denied 344 US 817 (1952).

<sup>44</sup>*Hecht v Pro-Football, Inc.* (1977) DC Circuit 570 F2d 982, cert denied 436 US 956 (1978).

<sup>45</sup>ibid 993. The court also mentioned before reaching the conclusion that:

The essential facility doctrine, also called the ‘bottleneck principle,’ states that ‘where facilities cannot practicably be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms. It is illegal restraint of trade to foreclose the scarce facility.’ This principle derives from [*Terminal Railroad*] and was recently reaffirmed in [*Otter Tail*]; the principle has regularly been invoked by the lower courts. (See *ibid* 992, footnotes omitted).

<sup>46</sup>In dictum, the Sixth Circuit stated, ‘There also exists a... line of cases which has been styled as promulgating the ‘bottleneck theory of antitrust law.’ Under this approach, a business or group of businesses which controls a scarce facility has an obligation to give competitors reasonable access to it.’ See *Byars v Bluff City News Co* (1979) 6th Circuit, 609 F2d 843, 856.

<sup>47</sup>*MCI* (n 11).

<sup>48</sup>ibid 1132–33. The case cited *Hecht*, *Otter Trail*, *Terminal Railroad*.

<sup>49</sup>Two other quick follow up cases which invoked the EFD—as categorised in Werden (n 42) 446–447 are *Fishman v Estate of Wirtz* ((1986) 7th Circuit, 807 F2d 520) and a district case,

non-tangible assets.<sup>50</sup> After the four-part test, the lower courts have construed it rather narrowly.<sup>51</sup>

However, recently, American jurisprudence in favor of EFD has suffered limiting checks, especially in appreciating the role of regulatory bodies to address the issue, and encouraging EFD only for those cases where regulation has not been able to settle points of contentions. Of particular importance is the famous *Trinko*<sup>52</sup> case. It was a class action suit brought against Verizon (local telephone monopolist), alleging antitrust violations since Verizon had not shared its network with rivals, even when this was mandated in Telecommunications Act 1996.<sup>53</sup> The court declined that there was an antitrust liability<sup>54</sup> while opining that the defendant had no general duty to deal with rivals with whom it did not have a prior course of dealing.<sup>55</sup> The court announced that the doctrine only ‘crafted by some lower courts’,<sup>56</sup> and that it had ‘never recognized such a doctrine...and find no need either to recognize it or to repudiate it here’.<sup>57</sup> Post-Trinko era has been characterized by increasing scepticism of EFD, and only those cases have survived the EFD claims who have been operating in unregulated market.<sup>58</sup> In 2007, the Antitrust Modernization Commission recommended that ‘[r]efusals to deal with horizontal rivals in the same market should rarely, if ever, be unlawful under antitrust law, even for a monopolist’.<sup>59</sup> The Justice Department in 2008 suggested that EFD be out rightly abolished.<sup>60</sup>

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*Consolidated Gas Co of Florida v City Gas of Florida, Inc* ((1987) SD Fla, 1987–2 Trade Cas 1 67,741).

<sup>50</sup>*BellSouth Advertising & Publishing Corp v Donnelly Information Publishing, Inc*, (1991) 11th Circuit, 933 F2d 952 (holding that the doctrine applies to both ‘physical structures’ and ‘services’, such as ‘information wrongfully withheld,’ including the service of providing business classifications for telephone directories), vacated, (1992) 11th Circuit, 977 F2d 1435, and reversed en bane on other grounds, (1993) 11th Circuit, 999 F2d 1436, cert denied 114 S Ct. 943 (1994).

<sup>51</sup>Lao (n 3) 565.

<sup>52</sup>*Verizon Commc'ns Inc v Law Offices of Curtis V Trinko, LLP* (2004) 540 US 398.

<sup>53</sup>ibid 402, 404. Also note that the Federal Telecommunications Commission had already fined Verizon for breaching its statutory obligations. This was expressly recognised in the judgement, see ibid 413.

<sup>54</sup>ibid 407.

<sup>55</sup>ibid 410.

<sup>56</sup>ibid 410.

<sup>57</sup>ibid 411.

<sup>58</sup>See, eg, *Nobody in Particular Presents, Inc v Clear Channel Commc'ns, Inc* (2004) 311 F Supp 2d 1048, 1113–14.

<sup>59</sup>Antitrust Modernization Commission, Report and Recommendations, 101–04 (2007), cited in Spencer Weber Waller and William Tasch, ‘Harmonizing Essential Facilities’ (2010) 76(3) Antitrust LJ 741, 744.

<sup>60</sup>US Department of Justice, Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act 127–29 (2008) cited in Spencer and Tasch, ibid 744.

## 2.2 *Doctrine's Origin in Europe*

EFD as it appeared in the US inspired many jurisdictions at multiple levels. Yet, since the doctrine expressly relies on its ability to read issues through competition law lens, there is a need to understand the legal framework that deals with competition law in US and Europe. Section 2 of the Sherman Act in US not only assumes the name of Section 82 of the European Commission (EC), but also differs markedly in spirit.<sup>61</sup> While Section 2 of the Sherman Act punishes willful acquisition or maintenance of monopoly power by the use of exclusionary conduct,<sup>62</sup> Article 82 EC prohibits abuse of dominant position by an undertaking in the common market.<sup>63</sup> In several ways, EC's approach is more sympathetic to the cause of EFD more than that of US.

It is important to note that the genesis of competition law in Europe reflected a desire to break down trade barriers and promote economic integration, in the hope that this would lead to a period of stability and peace in the post-war European environment.<sup>64</sup> That is why, the core objectives of Article 82 EC are to protect competition on the market as a means of enhancing consumer welfare, ensuring an efficient allocation of resources<sup>65</sup> and to ensure fairness and protect small and medium-sized firms.<sup>66</sup> Basic notions of fairness<sup>67</sup> and the idea that small and medium sized firms need protection feature more prominently under Article 82 EC than the equivalent provision in US, Section 2 of the Sherman Act. The origins of 'fairness' concerns under Article 82 EC reflect the impact of German *ordoliberal* thinking,<sup>68</sup> which attached importance to the notion that large firms should not unfairly limit their rivals' production and access to markets-on the initial drafting of Article 82 EC.<sup>69</sup>

<sup>61</sup>See J Bruce McDonald 'Section 2 and Article 82- Cowboys and Gentlemen' (Second Annual Conference, College of Europe, Global Competition Law Centre, Brussels, 16–17 June 2005) <<https://www.justice.gov/atr/speech/section-2-and-article-82-cowboys-and-gentlemen>> accessed 25 September 2017. See also Robert O'Donoghue and Atilano Jorge Padilla, *The law and economics of Article 82 EC* (Hart 2006) 11–12.

<sup>62</sup>See *United States v Grinnell Corp* (1966) 384 US 563.

<sup>63</sup>See EC Treaty, art 82.

<sup>64</sup>McDonald (n 61).

<sup>65</sup>See 'DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses' (Brussels 2005), para 4.

<sup>66</sup>McDonald (n 61) 7.

<sup>67</sup>Courts were like the spectators. Adam Smith aptly describes in Adam Smith, *The Theory of Moral Sentiments* (first published 1959, Penguin 2010) 101, 'In the race for wealth, and honours, and preferments, he may run as hard as he can, and strain every nerve and every muscle, in order to outstrip all his competitors. But if he should jostle, or throw down any of them, the indulgence of the spectators is entirely at an end'.

<sup>68</sup>John Kallaugher and Brian Sher, 'Rebates revisited: Anticompetitive effects and exclusionary abuse under Article 82' (2004) European Competition Law Review 263.

<sup>69</sup>McDonald (n 61) 7.

On the other hand, US antitrust law, which is much older, was borne of the desire to dismantle a number of cartels and conglomerates, or ‘trusts’ as they were known, that had come to dominate late 19th century economic life in the US, with adverse effects for consumers. Over a period of time, influenced by the vagaries of Great Depression,<sup>70</sup> post-war reconstruction efforts,<sup>71</sup> and academic writings, particularly of the Chicago School<sup>72</sup> informed the fundamental purpose of US antitrust law to protect the public from the failure of the market. As noted by the Supreme Court, ‘the law directs itself not against conduct which is competitive, even severely so, but against conduct which unfairly tends to destroy competition itself.’<sup>73</sup> American antitrust laws ‘are for the benefit of competition, not competitors.’<sup>74</sup>

This is precisely why Section 2 of the Sherman Act adopts a more minimalist, or less interventionist, approach to enforcement than Article 82 EC. Section 2 of the Sherman Act encourages a monopolist even, to compete aggressively on merits.<sup>75</sup> Even if such aggressive competition harms less efficient firms, it is the sort of competition that promotes the consumer interests that the Sherman Act aims to foster.<sup>76</sup> The underlying principle of US antitrust law is that striving for monopoly is an important element of the free-market system because it induces risk taking that produces innovation and economic growth.<sup>77</sup> The successful competitor, having been urged to compete, must not be turned upon when he wins.<sup>78</sup> In contrast, in Europe, dominant firms must be mindful of their rivals and not necessarily celebrate their successes in isolation.<sup>79</sup> Dominant undertakings have a ‘special responsibility’ not to allow its conduct to impair genuine undistorted competition on the common market.<sup>80</sup>

It is easy to imagine from preceding discourse that the intervening doctrine of essential facility will find more conducive environment in Europe. This is indeed the case. The doctrine was openly introduced by the EC in early 1990s and has indirectly inspired the legislation concerning deregulation of traditional natural

<sup>70</sup>See Wayne D Collins, ‘Regulation, Deregulation and Antitrust Law’ (1985) 7(1) *Antitrust (Newsletter)* 8.

<sup>71</sup>See James May, ‘Historical Analysis in Antitrust Law’ (1990) 35(4) *N Y L Sch L Rev* 857, refer to the economic policy during the post-war period.

<sup>72</sup>See Alan Devlin, ‘Antitrust in an Era of Market Failure’ (2010) 33(2) *Harv J L & Pub Pol'y* 557.

<sup>73</sup>*Spectrum Sports, Inc v McQuillan* (1993) 506 US 447, 458.

<sup>74</sup>*Ball Mem'l Hosp, Inc v Mutual Hosp Ins, Inc* (1986) 7th Circuit, 784 F2d 1325, 1338.

<sup>75</sup>See *Olympia Equip Leasing Co v Western Union Tel Co* (1986) 7th Circuit, 797 F2d 370, 375.

<sup>76</sup>See *Copperweld Corp v Independence Tube Corp* (1984) 467 US 752, 767.

<sup>77</sup>See *Verizon Communications Inc v Law Offices of Curtis v Trinko, LLP* (2004) 540 US 398, 407.

<sup>78</sup>*United States v Aluminum Co of Am* (1945) 2nd Circuit, 148 F2d 416, 430.

<sup>79</sup>McDonald (n 61) 4.

<sup>80</sup>Case T-219/99 *British Airways plc v Commission* (2003) Court of First Instance 2003 ECR 242.

monopolies.<sup>81</sup> A nontrivial scholarly literature emerged alongside<sup>82</sup> and only bolstered the existence of the doctrine in the EU. Like in the US, where judicial pronouncements decided the scope and institutional heaviness of the doctrine, in the EU, the Commission has developed an extensive case law referring to the doctrine expressly, and sometimes subtly.

The first case in which the principle was applied in 1974: *Commercial Solvents Corp v Commission of the European Communities*.<sup>83</sup> The judgement proposed that a dominant supplier of an input abused its dominant position when it refused to supply the input to a customer, the supplier's competitor in the downstream derivative market. *B&I/Sealink*<sup>84</sup> was one of the very first case in which the doctrine was explicitly applied. The case concerned Sealink as the owner of the port changed the timings in a way that its vessels obstructed B&Is loading procedure. A similar case was that of *Sea Containers/Stena Sealink*,<sup>85</sup> where the complainant was a new comer desiring entry into the market. The Commission granted interim measures in favour of the complainants in both cases. Up to this point, only a faint picture of 'essential facilities' could be drawn including any facility or infrastructure without access to which competitors could not provide services to their customers. There had to be some test to determine which facilities would be truly 'essential' or 'indispensable' rather than merely desirable. At the same time, the questions pertaining to actual access or sharing of facilities were also not yet answered. It was pertinent to decide whether the parties themselves or some authority, like the Commission, should dictate the terms of such an arrangement.

Other infrastructure related cases involve tunnels,<sup>86</sup> airports and ports. For instance, in *London European/Sabena*,<sup>87</sup> a Belgian firm was asked by the Commission to grant access to its computerized reservation systems to a British firm. In *FAG-Flughafen Frankfurt/Main AG*,<sup>88</sup> the company operating the airport

<sup>81</sup>Vassilis Hatzopoulos, 'The EU Essential Facilities Doctrine' (Research Papers in Law 2006) 3 <[https://lsa.umich.edu/content/dam/ces-assets/ces-docs/Hatzopoulos\\_EU\\_Essential\\_Facilities.pdf](https://lsa.umich.edu/content/dam/ces-assets/ces-docs/Hatzopoulos_EU_Essential_Facilities.pdf)> accessed 11 May 2018. Even though the authors note that the doctrine has only received limited and indirect support from Court of First Instance and European Court of Justice.

<sup>82</sup>See generally, Daniel Glasl, 'Essential Facilities Doctrine in EC Antitrust Law: A Contribution to the Current Debate' (1994) ECLR 306; Mark Furse, 'The essential Facilities Doctrine in Community Law' (1995) ECLR 469; Leo Flynn, 'The Essential Facilities Doctrine in the Community Courts' (1999) Commercial Law Practitioner 245.

<sup>83</sup>Joined Cases 6/73 and 7/73, *Commercial Solvents v Commission* 1974 ECR 223.

<sup>84</sup>*B&I/Sealink*, Decision (interim measures) of 11 June 1992, EC Bull 6-1992, para 1.3.30. On this decision see Nick Maltby, 'Restrictions on Port Operators: Sealink/B&I Holyhead' (1993) ECLR 223.

<sup>85</sup>*Sea Containers/Stena Sealink*, Decision (interim measures) of 21 December 1993, 94/19/EC, EE L 15, 18-1-94, 8.

<sup>86</sup>See, eg, *European Night Services Ltd (ENS) v Commission*, Joined Cases T-374/94, T-375/94, T-384/94 & T-388/94, 1998 ECR II-3141, [1998] 5 CMLR 718.

<sup>87</sup>*British Midland/Aer Lingus*, Decision (1992) 92/213/EEC, EE L 96/34.

<sup>88</sup>*FAG-Flughafen Frankfurt/Main AG*, Decision of 14 January 1998, 98/190/EC, EE L 72, 11-3-98, 30.

was also engaged in ground-handling services without allowing other companies to enter and compete. Notably, Commission's general attitude in this regard has not changed regardless of whether the defendant is a private party or public authority—something clear from the case of *Port of Rødby*<sup>89</sup> and that of *ICG/CCI Morlaix (Port of Roscoff)*,<sup>90</sup> where the defendants were Danish government and Chamber of Commerce of Morlaix in Brittany.

European approach to EFD is most visibly pronounced in IPR related cases, and in particular by the famous *Magill*<sup>91</sup> case, which was not only affirmed by European Court of Justice (ECJ) but has generated a significant amount of scholarship.<sup>92</sup> The case investigated and confirmed that three broadcasters of television programs in their refusal to grant licenses to Mr. Magill for publication of their weekly listing by him were considered engaging into abusive and anticompetitive practices. *IMS Health*<sup>93</sup> case has also given rise to a heated debate.<sup>94</sup> It involved access of IMS Health's (a market research company) patented database structure (brick structure) to other firms on market research to produce a more competitive database. The court said that 'on the premise ... that the use of the 1860 brick structure is indispensable to allow a potential competitor to have access to the market'.<sup>95</sup>

Perhaps the most significant case in the segment of IPR is that of *Microsoft*.<sup>96</sup> After a lengthy investigation, in 2004, the EC issued its decision against Microsoft. The Commission identified two infringements of Article 82 EC: (a) refusal to supply interface information to competitors to achieve client-to-client and server-to-server interoperability and leveraging its dominant position in the PC-client operating system market into the market for work-group server operating system under Article 82(b) EC, and (b) technological integration or 'tying' of Windows with Windows Media Player under Article 82(d), EC. The Commission imposed a record fine of €497 million, in addition to requiring Microsoft to provide the interoperability information and to produce Windows without Windows Media Player. Microsoft appealed and on 17 September 2007, the European Court of First Instance upheld the Commission's decision that Microsoft had abused its dominant position.

<sup>89</sup>*Port of Rødby*, Decision of 21 December 1993, 90/119/EC, EE L 55, 26-2-94, 52.

<sup>90</sup>*ICG/CCI Morlaix (Port of Roscoff)*, Decision (interim measures) of 16 May 1995 (IV/35.388) 5 CMLR (1995), 177.

<sup>91</sup>*Magill TV Guide/ITP, BBC & RTE*, Decision of 21 December 1989, OJ L 78, 43.

<sup>92</sup>See Richard Whish, *Competition Law* (5th edn United Kingdom, Butterworth & Co Publishers 2003) 665 and its bibliography.

<sup>93</sup>*NDC Health/IMS Health*, Decision (interim measures) of 3 July 2001 OJ 2002 L 59, 18.

<sup>94</sup>Valentine Korah, 'The Interface between Intellectual Property and Antitrust: The European Experience' (2001) 69(3) Antitrust LJ 801 (asking how there could be copyright in a list). See also Frank Fine, 'NDC/IMS: In Response to Professor Korah' (2002) 70(1) Antitrust LJ 247; John Temple Lang, 'Comment on Professor Korah's Paper Essential Facilities and Duty to License-IMS' (10th Annual Conference on International Intellectual Property Law and Policy, Fordham University School of Law, 2001).

<sup>95</sup>*NDC Health* (n 93), para 22.

<sup>96</sup>Commission Decision of 24 March 2004, COMP/C-3.37.792, C(2004) 900 final.

The case of *Bronner*<sup>97</sup> reflects the shift in courts' priorities. It not only restricts the scope of the doctrine by limiting its usage in situations where owner has more than a dominant position but also imposes a forward looking test, thereby ascertaining whether refusal to deal will lead to monopolization in downstream market.<sup>98</sup> In a way therefore, this case represents a bridging effort of Section 82 of EC Treaty that talks of abuse of dominant position and Section 2 of Sherman Act in US which centralises monopolization in its context.<sup>99</sup> The case involved Austria's leading newspaper publishing company refusing to allow another newspaper its delivery services. In addition to addressing the issue on grounds that emerged from existing case laws, the court also held that it is important to observe the refusal is likely to eliminate all competition, and the service being indispensable (there is no actual or potential substitute for home-delivery scheme).<sup>100</sup>

Overall, in a way, with *Trinko* and *Bronner* cases, the uncertainty in excavating reasonableness in potential EFD cases seems to have increased. It is in this light that the chapter proposes alternative theoretical benchmarks against which one can view the issues. But before that, it may be useful to highlight how EFD legislations and case law have impressed upon regulatory thought in few other jurisdictions.

### 3 Application of the Doctrine in IPR Cases: Comparing US and EU Approach

Because of the aggressive competition encouraged by US and the responsible competition standard adopted by Europe, they have been regarded as *cowboy capitalists* and *gentlemen competitors* respectively.<sup>101</sup> Close inspection of the legislative language itself surfaces their inherent subtle differences in approach. The European Act is hinged on prohibiting '...abuse by ... undertakings of a dominant position...',<sup>102</sup> while American counterpart forbids actions of '[e]very person who shall monopolise, or attempt to monopolise...'.<sup>103</sup> Hence, while one attacks dominant position, the other, monopoly. Dominance can be presumed if a single undertaking owns more than 50% of the market share, which reflects in European

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<sup>97</sup>Case C-7/97 *Oscar Bronner GmbH & Co KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co KG* 1998 ECR I-7791, [1999] 4 CMLR 112.

<sup>98</sup>See Sébastien J Evrard, 'Essential Facilities in the European Union: Bronner and Beyond' (2004) 10(3) Colum J Eur L 491.

<sup>99</sup>ibid 491.

<sup>100</sup>ibid, para 41.

<sup>101</sup>McDonald (n 61).

<sup>102</sup>Article 82 of EC.

<sup>103</sup>Section 2 of Sherman Act, courts have interpreted that monopolization requires (1) the willful acquisition or maintenance of monopoly power (2) by the use of exclusionary conduct.

approach<sup>104</sup> while in US, any share less than 70% will make it highly unlikely to be appreciated as an antitrust case. Divergent treatment of tying by Microsoft exemplifies this amply. Even though the company had 90% market share and pure monopoly in operating system market, the appeals courts in US required that regardless of the market share, it should be evaluated under a rule of reason, whether there was actual proof of anticompetitive effects in the downstream browser markets.<sup>105</sup> The EC decision on contrast, considered the tie between operating system and downstream media player as outrightly unlawful without delving into excavating proof of impact on consumers.<sup>106</sup> The case laws will help us generalize this observation.

The earlier American approach in deciding the framework of EFD in IPR related cases, was derived in by precedents set by court of Appeals and three different circuits and had presumed the legality of refusal to license cases in nearly absolute terms. The first case in this regard was that of *Data General*,<sup>107</sup> which was a computer manufacturing company, and it declined to license copyrighted diagnostic software to independent service organizations that competed with it in maintenance and repair of its computers. Even though the First Circuit acknowledged that ‘cases in which antitrust liability is unlikely to frustrate the objectives of the Copyright Act are certainly rare’,<sup>108</sup> it suggested that this can happen only if there is enough evidence that monopolist had acquired IP protection unlawfully. This was not the case here and affirmed that ‘author’s right to exclude others from use of its copyrighted work is presumptively valid business justification.’<sup>109</sup>

This judicial view was further reinforced by Ninth Circuit’s case of *Kodak*,<sup>110</sup> in which the legality of refusal to license was extended to even patents, largely based on the fact that presumption of legality could be rebutted by evidence of anti-competitive intent on the part of IP holder who is refusing to license.<sup>111</sup> The Federal Circuit has crystallised this narrow view in form of a rule, in a case involving Xerox<sup>112</sup> that involved Xerox refusing to sell and license its protected replacement parts and software maintenance, driving the plaintiff out of the service market. The court held that a patent holder is free to exclude competition altogether in more than one antitrust market, absent exceptional circumstances.<sup>113</sup>

<sup>104</sup>See, eg, Case 27/76 *United Brands v Commission* (1978) ECJ 1978 ECR 207, para 65.

<sup>105</sup>*United States v Microsoft Corp* (2001) DC Circuit, 253 F3d 34, 84.

<sup>106</sup>Case COMP/C-3/37.792 *Microsoft*, para 5.3.2.1.4 (24 March 2000); *ibid*.

<sup>107</sup>*Data General Corp v Grumman Systems Support Corp* (1994) 1st Circuit, 36 F3d 1147.

<sup>108</sup>*ibid* 1187.

<sup>109</sup>*ibid*.

<sup>110</sup>*Image Technical Services, Inc v Eastman Kodak Co* (1997) 9th Circuit, 125 F.3d 1195.

<sup>111</sup>*ibid* 1218.

<sup>112</sup>*In re Independent Services Organizations Antitrust Litigation (CSU v Xerox)*: (2000) Federal Circuit, 203 F3d 1322.

<sup>113</sup>*ibid* 1327.

The US therefore, appeared to grant immunity to firms refusing to license, in view of stronger support for rights-based-framework as deciding factor between justified and unjustified restraints of competition.<sup>114</sup> Such views, which favor one area of law (IPR) compared to another (competition) rest on assuming that relationship between IPR and competition law is conflicting—a myopic outlook for appreciating their complementary set up to promote innovation.<sup>115</sup> Although it appears that courts have generally been inclined to recognise the loss of incentives to innovate and invest rather than antitrust duty to license.<sup>116</sup>

This need to ensure companies' IP incentives are not diluted was further observed by the Supreme Court in *Trinko* case.<sup>117</sup> The court argued that while invoking Sherman Act's Section 2 is plausible, but its applicability is limited by (a) enabling the firm to be free in using their property thereby incentivizing them to innovate, (b) court's ill-equipped competence to determine terms of dealing, and (c) possibility of collusion in compelled negotiation.<sup>118</sup> This judgement shows American legal system's inclination to tilt in favor of IP rights and its acceptance of certain degree of market power that could spur innovation.<sup>119</sup> There are good reasons to doubt these viewpoints and scholarly work has shown that innovation may actually be higher in competitive markets.<sup>120</sup> Regardless of the merits in arguments, the insulation of IPR against application of antitrust law in American judgements stifles EFD's fertility.

The European approach (driven by the Commission and ECJ) is fairly different from the American.<sup>121</sup> This has been mentioned in the preceding part of the chapter, but authors look at it more closely here. Even though considerations of long-term incentives and contractual freedom is espoused regularly, the imposition of duty to license that interferes with the IPR is common—giving it an IP-friendly color. Even though EFD principle has been implemented in judgements of European courts from 1988, a major thrust to evolving jurisprudence in this regard came in *Magill* case.<sup>122</sup> The three broadcasters of TV programs in Ireland used to provide their

<sup>114</sup> Beatriz Conde Gallego, 'Unilateral refusal to license at indispensable intellectual property rights —US and EU approaches' in Josef Drexl (ed), *Research handbook on intellectual property and competition law* (Edward Elgar Publishing 2010) 218.

<sup>115</sup> *ibid* 219.

<sup>116</sup> *ibid*.

<sup>117</sup> For a critical analysis of *Trinko* decision, see Josef Drexl, 'IMS Health and Trinko-Antitrust placebo for consumers instead of sound economics in refusal-to-deal cases' (2004) 35 IIC—International Review of Intellectual Property and Competition Law 788.

<sup>118</sup> *ibid*.

<sup>119</sup> *ibid*.

<sup>120</sup> The argument was made first, very powerfully, in Kenneth Arrow, 'Economic Welfare and the Allocation of Resources for Innovations' in Richard R Nelson (ed), *The Rate and Direction of Inventive Activity* (Princeton University Press 1962).

<sup>121</sup> For a quick overview of case law of the ECJ on refusal to license, see Richard Whish, *Competition Law* (London: LexisNexis 2003) 758–762.

<sup>122</sup> *Magill* (n 91).

copyrighted program schedules to daily newspapers free of charge, but there was no comprehensive weekly listing guide. When Mr. Magill attempted to produce an Irish guide of all channels, he was refused the copyright license. He complained to the EC. The Commission considered it violating Article 86 of Rome Treaty,<sup>123</sup> and this view was endorsed by the ECJ, which stated, ‘prevented the appearance of a new product, a comprehensive weekly guide to television programmes, which the appellants did not offer and for which there was a potential consumer demand.’<sup>124</sup> Further, it argued that the appellant had monopolized ‘the secondary market of weekly television guides by excluding all competition in that market since they denied access to the basic information which is the raw material indispensable for the compilation of such a guide.’ It explained why this case fits into the ‘exceptional circumstances’ where a refusal to license prevented the appearance of a new product. The reading of the case clearly depicts European approach to be far more considerate towards competition issues in comparison to its IPR counterparts.

Several uncertainties arising out of *Magill* case were put to an end in the next landmark judgement, *IMS Health* case.<sup>125</sup> It concerned a copyrighted ‘1860-brick-structure’ for processing regional sales data becoming *de facto* industry standard in Germany. The copyright holder’s refusal of the license, even though acknowledged as non-abusive in nature generally, was held to constitute as a violation of Article 82 EC. It laid out three cumulative conditions to be satisfied for refusal to license to constitute an abuse, namely (a) refusal must prevent emergence of new product for which there is a potential consumer demand, (b) it must be unjustified, and (c) it must exclude any competition on a secondary market.<sup>126</sup> In addition to offering legal certainty to gaps left unfilled from *Magill* case, the ECJ in this judgement, broadly interpreting *Magill*, also ‘does away with leveraging of market power between two distinct markets as an independent form of abuse in cases involving IPRs.’<sup>127</sup>

The attitude of Commission only resonates that of the judiciary, in its willingness to affirm a duty to license under Article 82 EC. Even though the Commission did not consider *IMS Health* case as that involving leveraging, it did so in the *Microsoft* case.<sup>128</sup> Moreover, it applied a new balancing test, comparing the possible negative impact that duty to license may have on right holder’s incentives to innovate, and the positive impact of this duty on the level of innovation of the whole industry.<sup>129</sup> This reasoning is also reflected in Commission’s Discussion

<sup>123</sup>art 86 prohibits all kinds of ‘Abuse by one or more undertakings of a dominant position within the common market.’

<sup>124</sup>*Magill* (n 91), para 54.

<sup>125</sup>*NDC Health* (n 93).

<sup>126</sup>*ibid*, para 48.

<sup>127</sup>Gallego (n 114) 223.

<sup>128</sup>See European Commission of 24 March 2004, *Microsoft* (n 106).

<sup>129</sup>See Francois Leveque, ‘Innovation, Leveraging and Essential Facilities: Interoperability Licensing in the EU Microsoft Case’ (2005) 28 World Competition 28 71-75.

Paper<sup>130</sup> on exclusionary abuses, which mentions that for refusal to license to be abusive, following conditions<sup>131</sup> have to be met: (a) there is a refusal to license (it also includes license with unreasonable terms,<sup>132</sup> or dilatory tactics by dominant firm<sup>133</sup>), (b) right holder has a dominant position in the relevant (mostly upstream) market, (c) the IPR is indispensable, (d) there is likely market-distortionary foreclosure effect on downstream market, (e) no negative effects on long-run incentives to innovate, and (f) refusal to license prevents the emergence of a new product. Indeed, EC's decision in the *Microsoft* case<sup>134</sup> was to make available, on reasonable and non-discriminatory terms, proprietary information on certain Windows communication protocols since it refused to supply them to a rival, was not a surprise.

This suggests a very broad understanding of how EFD could be interpreted and incorporated into the legal thought process of the EC or judiciary. In their expansive approach, the Commission has relied on not just the precedence but adequate economic analysis to understand tension (if at all) between IPR and competition law, and sought to resolve it by means of sculpturing informed judgement on how to determine whether a specific case falls under the exceptional criteria. The interventionist approach of EC reflects its obsession with false negatives and more confident in predicting outcomes. On the other hand, US Supreme Court feels that 'cost of false positives counsels against an undue expansion of Section 2 liability.'

## 4 Application of the Doctrine in India

Interestingly, India witnesses application of EFD not through competition framework, but through intervention of sectoral regulatory institutions. And in post-*Trinko* era, having regulatory agencies manage the doctrine in their respective industries, is no unusual in the West either.<sup>135</sup> The regulatory agencies do possess superior competence and information over competition courts for managing

<sup>130</sup>'DG Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuse' (Brussels—European Commission 2005) <<http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>> accessed 24 April 2018.

<sup>131</sup>ibid 64–67.

<sup>132</sup>'Deutsche Post AG-Interception of Cross Border Mail', OJ 2001 L 331/40, para 103. See also Discussion paper, para 225.

<sup>133</sup>See Commission Decision of Jun. 4, 2004, Case COMP/38.096, *Clearstream* (Clearing and Settlement); see also *Sea Containers v Stena Sealink-Internal measures*, OJ 1994 L 15/8, paras 70–74.

<sup>134</sup>*Microsoft* (n 106), paras 4.1.2, 5.3.1, 6.1.1. *United States* (n 105).

<sup>135</sup>Joesph D Kearney and Thomas W Merrill, 'The Great Transformation of Regulated Industries Law' (1998) 98(6) Colum L Rev 1323.

complex access arrangements.<sup>136</sup> These sector regulators are intimately linked with infrastructure provisions, and therefore relate to physical assets more than non-tangible ones. Primary legislative frameworks in this regard are that of the Telecom Regulatory Authority of India Act (TRAI) 1997, the Electricity Act 2003 and the Petroleum and Natural Gas Regulatory Board Act (PNGRB) 2006.<sup>137</sup>

Section 11(1) (c) and Section 11(1) (l) of the TRAI Act, mandate interconnection and technical compatibility between various service providers and maintain a register of such agreements.<sup>138</sup> Enacting the *Telecommunication (Broadcasting and Cable Services) Interconnection Regulation 2004* where the arrangements to guide the interconnection and revenue share among service providers is enumerated, is a step in this direction.<sup>139</sup> In addition, TRAI has also enacted *The Telecommunication Interconnection (Reference Interconnect Offer) Regulation 2002* which specified the terms and conditions on which interconnection of its network with that of other service providers seeking interconnection rests. In 2003, the *Telecommunication Interconnection Usage Charges (IUC) Regulation* was passed that encouraged regular consultation with stakeholders to preserve coherence in the interconnection regime was followed.<sup>140</sup>

*The Petroleum and Natural Gas Regulatory Board Act (PNGRB) 2006 Act* exhibits the idea of essential facilities in the definition of ‘common carrier’ or ‘contract carrier’. Section 2(j) mentions that there is non-discriminatory open access given by the Board from time to time to pipelines for transportation of petroleum and related products. Section 2(m), which defines ‘contract carrier’ as ‘such pipelines for transportation of petroleum, petroleum products and natural gas by more than one entity pursuant to firm contracts ... as may be declared by the Board...’. The board can also regulate the open access and transportation rate under Section 61(e).<sup>141</sup> Further, in 2008, the Ministry of Petroleum and Natural Gas

<sup>136</sup>Philip J Weiser, ‘The Relationship of Antitrust and Regulation in a Deregulatory Era’ (2005) 50 (4) *Antitrust Bull* 549.

<sup>137</sup>For an illustrative account, see Pradeep Mehta, ‘Is there a Case for Essential Facility Doctrine in India?’ in Pradeep S Mehta (ed), *Competition and Regulation in India 2011: Leveraging Economic Growth Through Better Regulation* (Jaipur: CUTS International & CIRC 2012).

<sup>138</sup>The Telecom Regulatory Authority of India Act 1997 (TRAI), ss 11 (1)(c), 11 (1)(l).

<sup>139</sup>s 3(2) of the Act asserts that ‘Every broadcaster shall provide on request signals of its TV channels on non-discriminatory terms to all distributors of TV channels....’.

<sup>140</sup>This success of the interconnect regime engineered by the telecom regulator is reflected in the growth of the sector as well. The number of subscribers has increased to 764.77 million in 2010 from merely 76.54 million in 2004. Private sector participation which was 5% in 1999 has increased to 84.5% in 2010. Growth rate of rural telephones has also increased from 16% in 2004 to 32.81% in 2010 of which 84.5% of telephone connections are provided by the private operators. See Economic Survey (2010–11), Government of India.

<sup>141</sup>The Petroleum and Natural Gas Regulatory Board Act (PNGRB) 2006, s 61(e).

issued a draft regulation according to which, once an infrastructure is declared common user facility, it is compulsory for the body owning the capacity to share it with the other users.<sup>142</sup>

The Electricity Act 2003 captures elements of EFD by defining what it terms, ‘open access’ (stated under Section 42(2) and 47(2) of the Act).<sup>143</sup> Open access implies non-discriminatory provision of distribution or transmission to any licensee, consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission. Further, the Act under Section 38(2)(d) directs the Central Transmission Utility to provide non-discriminatory access of transmission to the licensee or generating company on payment of transmission charges and to any consumer when open access is provided by State Commission.<sup>144</sup> A similar provision is made for the State Transmission Utility and Transmission Licensee under Section 39(2)(d) and 40(2)(d) respectively.<sup>145</sup>

In the context of IPR, relevant statutory provision in Competition Act 2002 is 3 (5), which immunises those from competition law, who are protecting their IPR, as long as such protection is reasonable.<sup>146</sup> However, even though there is no suggestive list of what actions would be unreasonable, one can craftily interpret exclusive licensing or no licensing (given certain necessary conditions) as one of those actions. This was affirmed by the High Court of Delhi, in *Gramophone Company of India Ltd. v Super Cassette Industries Ltd.*<sup>147</sup> The Supreme Court, in *Entertainment Network (India) Ltd. v Super Cassette Industries Ltd.*,<sup>148</sup> noted that even though the copyright owner has complete freedom to decide the licensing provisions, this right is not absolute and is subject to the compulsory licensing schemes. The *Bayer v Natco* case which involved first issuance of compulsory license in India is one major case that has potential to create strong precedent. The case law is rather scanty with little help to estimate the general ideological pattern that seems to be emerging in IP-competition law conflict. And perhaps more importantly, no case as yet has been filed with the Commission invoking EFD.

<sup>142</sup>The industry has responded positively to these interventions leading to explorations off the East coast and development of new Liquefied Natural Gas terminals like Dabhol and Kochi. See D Bhattacharyya and D Singh, ‘India’ in Geoffrey Picton-Turberville (ed), *The International Comparative Legal Guide to: Gas Regulation 2010* (Global Legal Group: UK 2010).

<sup>143</sup>The Electricity Act 2003, ss 42(2), 47(2).

<sup>144</sup>ibid, s 38(2) (d).

<sup>145</sup>State Transmission Utility and Transmission Licensee Act, ss 39(2)(d), 40(2)(d).

<sup>146</sup>Competition Act 2002, s 3(5).

<sup>147</sup>*Gramophone Company of India Ltd. v Super Cassette Industries Ltd.* MIPR 2010 (2) 349.

<sup>148</sup>*Entertainment Network (India) Ltd. v Super Cassette Industries Ltd.* (2008) Supreme Court, (4) ALD 47.

## 5 Problems with the Indian Approach

While it appears that infrastructure provision has in spirit, captured the essence of EFD in India, there are inherent conflicts in this setting. Firstly, the impact has not been uniform. For instance, the said ‘open access’ in electricity has not translated facility sharing in reality for a variety of complex reasons.<sup>149</sup> Secondly, and at principle level, regulatory response is *ex-ante* as compared to intervention by competition authorities, which is usually *ex-post* in such cases.<sup>150</sup> The regulatory agencies aim to ‘build’ markets and the competition commissions are expected to ‘repair’ them. In countries like India, where concept of regulatory institutions is rather new (as imported from Washington Consensus) the need to repair is high because of fossilised structure of markets that has high likelihood of being anti-competitive and distortionary. Consider the pre-liberalization monopolists still seeking rent that began in the *license raj*.<sup>151</sup> Scholarly literature on regulatory institutions of Global South is emerging slowly,<sup>152</sup> and there is little doubt in the scepticism shared by scholars in its nascent position and modest success.<sup>153</sup> *Ex-ante* approaches should be preferred when old market structures are in sync with contemporary growth trajectory of the country—this is clearly not the case with India. After experimenting with first stage of reforms,<sup>154</sup> India is witnessing paradigm shifts in which interactions between state and the market are occurring. In such dynamic shifts, *ex-ante* regulation needs a very crucial support of ex post monitoring, and ‘remedy’ the fissures that surface in time. Competition authorities, by nature and definitional mandate, have been equipped to provide these very remedies.

Thirdly, there are significant overlaps between sector regulators and Competition authorities in India, and their resolution is important.<sup>155</sup> This was clear in a suit brought by Reliance Industries Ltd. to Competition Commission of India (CCI) for alleged cartel of its three competitors in supplying fuel to an airline. However, the defendants challenged the jurisdiction of CCI to deal with the matter, in Delhi High

<sup>149</sup>See Pradeep Mehta (n 137) 149.

<sup>150</sup>Marie-Anne Frison-Roche, ‘Regulation v Competition’ (2011) *The Journal of Regulation*, I-1.30:550.

<sup>151</sup>Phillipe Aghion and others, ‘The Unequal Effects of Liberalization: Evidence from Dismantling the License Raj in India’ (2008) 98(4) *American Economic Review* 1397.

<sup>152</sup>Navroz K Dubash and Bron Wen Morgan, *The Rise of the Regulatory State of the South: Infrastructure and Development in Developing Economies* (Oxford University Press 2013).

<sup>153</sup>*ibid*.

<sup>154</sup>Financial Sector Legislative Reforms Commission, *Report of the Financial Sector Legislative Reforms Commission* (2013).

<sup>155</sup>See, for an overview of the issue, Pradeep Mehta and Natasha Nayak, ‘Harmonising Regulatory Conflicts’ (CUTS International 2012) <<http://oldwebsite.iica.in/images/Harmonising%20Regulatory%20Conflicts.pdf>> accessed 10 May 2018.

Court and argued that sector regulator was a more competent authority. The court passed an interim order in favour of the three companies' claim.<sup>156</sup> Similar treatment was suffered by CCI yet again in its case involving investigation of abuse of dominant position by three electricity companies when the state electricity regulatory commission intervened in the investigation claiming its sole jurisdiction to deal with these matters.<sup>157</sup> In the banking sector as well, Reserve Bank of India has argued that issues of mergers in banks should be kept outside the purview of CCI.<sup>158</sup> Even though the Competition Act 2002 encourages cooperation between sector regulators and CCI, particularly in Section 21 and 21 A,<sup>159</sup> little has been achieved on that front.

With regard to non-tangible products, which invokes EFD for IPR related competition issues, the framework is restricted squarely to the concepts of compulsory licensing. Even though the Patent Act 2005 possesses clauses in favor of compulsory licensing, it has only been used once for pharmaceutical products.<sup>160</sup> In terms of pharmaceutical innovation, India never needed compulsory licensing until WTO emerged, because Indian Patents Act 1970 follows a process patent system. Although law permitted process patents on medicines,<sup>161</sup> it was rarely sought and had limited scope.<sup>162</sup> This therefore gave rise to a number of local pharmaceutical firms increasing their share of the market.<sup>163</sup> Indian pharmaceutical firms became larger and more sophisticated. They employed reverse engineering methods to develop new processes for the drugs. Over the next three decades, Indian pharmaceutical industry became extremely competitive and diverse<sup>164</sup> and by 1990s, India started producing the most inexpensive medicines in the world.<sup>165</sup> This way,

<sup>156</sup>ibid 28.

<sup>157</sup>ibid.

<sup>158</sup>ibid 29.

<sup>159</sup>Competition Act 2002, ss 21, 21(a).

<sup>160</sup>*Bayer Corporation v Union of India, Controller of Patents and NATCO Pharma Limited* MIPR 2013 (2) 97.

<sup>161</sup>See The Patents Act 1970, No. 39, s 53(1) (a). For example, such patents only lasted for the shorter of five years from the date of grant or seven years from the date the patent was filed.

<sup>162</sup>H Ashok Chandra Prasad and Shripad Bhat, 'Strengthening India's Patent System: Implications for Pharmaceutical Sector' (1993) 28 Economic and Political Weekly 1037.

<sup>163</sup>This was accompanied by other regulatory and policy measures that the government took to encourage building local markets against foreign firms.

<sup>164</sup>For an overview of how pharmaceutical industry developed after patent law was enacted, see Sudip Chaudhuri, *The WTO and India's Pharmaceutical Industry: Patent Protection, TRIPS and Developing Countries* (Oxford University Press, New Delhi 2005). See also Aradhna Aggarwal, 'Strategic Approach to Strengthening the International Competitiveness in Knowledge Based Industries: The Indian Pharmaceutical Industry' (Research and Information System for Developing Countries 2004) Discussion paper no 80 <<http://www.ris.org.in стратегичн-стремленій-на-вивчення-індіанської-фармацевтичної-промисловості>> accessed 24 April 2018.

<sup>165</sup>ibid.

from patent policy's perspective, access to medicines was not a concern<sup>166</sup>—meaning Patent Act 1970 has produced a favored system for access to medicine in India.<sup>167</sup>

In 1995, WTO introduced TRIPS, setting up minimum standards of IP regulation,<sup>168</sup> specifying enforcement mechanisms, dispute resolution features and remedies. India opposed TRIPS initially,<sup>169</sup> but finally acceded to the Agreement, since staying out of WTO framework was a difficult choice. However, India bought time until 2005 to comply with TRIPS. By this time, Doha Development Agenda had been carved out as well. In 2005, India adopted TRIPS, and thereby institutionalised *product patent* regime in pharmaceutical sector, supplanting the earlier *process patent* approach in pharmaceutical industry in the Patents Act 2005. But at the same time, invoked the flexibility provided for in the TRIPS Agreement<sup>170</sup> and provide for compulsory licensing regime.<sup>171</sup> The compulsory licensing provisions in the Act could be broadly classified into (a) general compulsory licensing provisions; (b) a provision relating to pharmaceutical patents in case of emergency; and (c) a license to export pharmaceuticals to countries with insufficient manufacturing

<sup>166</sup>For the role of patents in the evolution of the Indian pharmaceutical industry, see Biswajith Dhar and Niranjan Rao, 'Transfer of Technology for Successful Integration into the Global Economy: A Case Study of the Pharmaceutical Industry in India' (2002) UNCTAD/UNDP Programme on Globalization, Liberalization and Sustainable Development, New Delhi. See also Sudip Chaudhuri, *WTO and India's Pharmaceutical Industry: Patent Protection, TRIPS and Developing Countries* (New Delhi: Oxford University Press 2006).

<sup>167</sup>Access to medicines has been a primary concern from the perspectives of affordability though, and largely so. India is overburdened by communicable and infectious diseases alongside an emerging epidemic of non-communicable diseases. But public health spending constitutes around 0.9% of Gross Domestic Product. Government expenditure of health in India is 17.9% of the total health expenditure and remaining 82.1% is private in nature. See Central Bureau of Health Intelligence, *National Health Profile* (New Delhi: Ministry of Health and Family Welfare, Government of India 2005) 77–79. For the details of health financing in India, see also Ministry of Health and Family Welfare, 'National Health Accounts of India 2001–2002' (New Delhi: Ministry of Health and Family Welfare 2005). The World Health Organization's *World Medicine Situation Report* based 1999 data state that out of (the then) 998 million people in India, only 17% has the access to medicine. For an overview, see K M Gopakumar, 'Product Patents and Access to Medicines in India: Critical Review of Implementation of TRIPS Patent Regime' (2010) 3 Law and Development Review 325.

<sup>168</sup>TRIPS contains requirements that nations' laws must meet for copyright rights, including the rights of performers, producers of sound recordings and broadcasting organizations; geographical indications, including appellations of origin; industrial designs; integrated circuit layout-designs; patents; monopolies for the developers of new plant varieties; trademarks; trade dress; and undisclosed or confidential information.

<sup>169</sup>George K Foster, 'Opposing Forces in a Revolution in International Patent Protection: The US and India in the Uruguay Round and Its Aftermath' (1998) 3(1) UCLA J Int'l L & Foreign Aff 283.

<sup>170</sup>See TRIPS Agreement, art 31.

<sup>171</sup>For a broad overview of Indian patent structure and compulsory licensing, see N S Gopalakrishnan and T G Agitha, 'The Indian Patent System: The Road Ahead' in Ryō Shimanami (ed), *The future of the patent system* (Edward Elgar Publishing 2012).

capabilities; and the grounds on which a general compulsory license can be requested by an interested person after the expiry of three years from the granting of a patent are: (a) the reasonable requirements of the public have not been satisfied; (b) the patented invention is not available to the public at a reasonably affordable price; or (c) the invention is not worked in the territory of India.<sup>172</sup> However, in the last eight years after the enactment of the law, barely any legislation has emerged in this regard. The only case, which has been very popular, is that of *Natco v Bayer*, decided in 2012 which raised significant reactions.<sup>173</sup> Yet, given how multinational companies are engaging vigorously in making generic drugs and entering into strategic alliance with Indian companies, it is difficult to say with certainty how the judgement will impact the general application of principle of EFD in IPR in India.<sup>174</sup>

Until date, there has not been a single competition law case that has invoked the principle of EFD.<sup>175</sup> Yet, the legislative framework on which competition authority is built provides sufficient possibilities for EFD to be explored. For instance, Section 4(c) of the Competition Act 2002, which asserts that denial of market access to others by a dominant player would be an abuse of dominant position, furnishes a fertile platform to invoke EFD. More precisely, Section 4(2)(e) of the Competition Act 2002<sup>176</sup> in India stipulates that an enterprise shall be considered to

<sup>172</sup>Indian Patents Act 2005, ss 84, 87, 92, 92A. See also s 107A, which is also known as Bolar exception rule, which permits activities for the development of information required by the authorities for approval of a generic version of a patented medicine.

<sup>173</sup>See Peter Roderick and Allyson M Pollock, 'India's patent laws under pressure' (2012) *The Lancet* 380.9846: e2-e4 <[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)61513-X/fulltext?rss=yes](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61513-X/fulltext?rss=yes)> accessed 11 May 2018. See also, Betsy Vinolia Rajasingh, 'India's First Compulsory Licence Over Bayer's Patent' (2012) *Journal of Intellectual Property Law and Practice* 482.

<sup>174</sup>See for instance, Sudip Choudhary, 'Multinationals and Monopolies: Pharmaceutical Industry in India After TRIPS' (2012) 48 (12) *Economic and Political Weekly* 46.

<sup>175</sup>Something akin to the essential facilities doctrine has been noted by the Supreme Court, albeit not in the context of antimonopoly law but the duty of private bodies performing public functions. In the case of *VST Industries Limited v VST Industries Workers' Union and Anr* (2001) 1 SCC 298 it was held that:

It is noticed that not all the activities of the private bodies are subject to private law, e.g., the activities by private bodies may be governed by the standards of public when its decisions are subject to duties conferred by statute or when by virtue of the function it is performing or possible its dominant position in the market, it is under an implied duty to act in the public interest (emphasis added)....

Further, the court asserted that any private company in India that is controlling infrastructure facility through concession agreement as awarded by the government will be considered as performing a public function and thus is expected to act in public interest. If the company refuses to deal with any competitor then it would be under judicial scrutiny for performing an arbitrary action of a body discharging public functions.

<sup>176</sup>The Competition Act 2002 (n 12).

have abused its dominant position if it uses its dominant position in one market to enter another market. Under the EC Treaty, Section 82 may involve markets where there is no dominant company,<sup>177</sup> and ‘leveraging’ may occur when a monopolist uses power in one market to induce or foreclose sales in another market and thereby monopolise both.<sup>178</sup>

Leveraging is a label for various types of conduct that have in common the feature that they involve a firm that is active in two or more related markets.<sup>179</sup> A monopolistic firm may assert or ‘leverage’ its power to extend its monopoly to other markets and thereby increase the social harm caused by the initial monopoly.<sup>180</sup> In the *Microsoft* case, leveraging was read into both infringements, regarding refusal to supply interoperability information under Article 82(b) EC and tying of Windows and Windows Media Player under Article 82(d) EC.

Leveraging, even though characterised by specificities and not universally anticompetitive,<sup>181</sup> affords very powerful way to justify application of EFD.

The CCI can make creative use of few other clauses to rest its case on EFD principles. Section 18 provides for duty of the Commission to ‘eliminate practices having adverse effect on competition’ and it should be construed broadly. Article 19 (3) and 19 (4) allow Commission to have regard with several factors that may potentially threaten competition viz. barriers to new entrants, vertical integration of the enterprise, etc. The Commission also has the liberty to make new regulations, which could be done to conceptualise and produce a statutory understanding of EFD.

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<sup>177</sup>See, eg, ‘DG Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses’ (2005) 8 <<http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>> accessed 10 May 2018.

<sup>178</sup>Robin Cooper Feldman, ‘Defensive Leveraging in Antitrust’ (1999) 87(6) Geo LJ 2079.

<sup>179</sup>McDonald (n 61) 207. See also, Louis Kaplow, ‘Extension of Monopoly Power through Leverage’ (1985) 85(3) Colum L Rev 515.

<sup>180</sup>See Phillip E Areeda, Louis Kaplow and Aaron S Edlin, *Antitrust Analysis: Problems, Text and Cases* (6th edn, Aspen 2004) 382.

<sup>181</sup>There is a need to distinguish pro-competitive and anticompetitive leveraging. A firm indulging in activities in several markets would constantly leverage. Not all leveraging conduct is violative of competition law. For example, economies of scope-where it is cheaper to produce the two products together than to make each separately-are an example of legitimate leveraging. See Donoghue and Padilla (n 61) 208. The traditional belief that a firm with a monopoly in one market always an incentive to extend that monopoly to a market for a complementary product, and thereby get two monopoly profits instead of one has been positively influenced by the Chicago School’s ‘single monopoly profit theorem’, according to which, a monopoly can choose to exercise its power in other markets or can link markets, but in doing so it does not earn more than one monopoly profit, it does not gain monopoly power over additional markets, and it does not increase the harm caused to the society (see *ibid*). But recent developments rearticulate the design of leveraging and proposed that it was possible to develop models in which leveraging behaviour could be shown to harm consumer welfare (Donoghue and Padilla (n 61) 179).

## 6 Why should Indian Practice be Sympathetic to a Liberal Interpretation of EFD

There are several compelling reasons that warrant the Indian law on refusal to deal to be modeled on the lines of European law. In fact, a plain reading of Article 82(b) EC and Section 4(2)(b) of the Competition Act 2002 (which are the provisions relating to refusal to deal), bring to notice the stark similarities in the language of the provisions. A basic objective of Article 82 EC is to ensure fairness and protect small and medium-sized firms. For instance, rules relating to predatory pricing were justified on the basis that, below-cost prices could drive away undertakings as efficient as dominant firms but which, because of their smaller financial resources, are incapable of withstanding the competition waged against them.<sup>182</sup> Several prominent members who laid the foundation for the European Community belonged to the *ordoliberal* school of thought, which believed that collaboration between the Nazi regime and several private cartels led to the disintegration of Germany.<sup>183</sup> They believed that social welfare was achievable only through an economic order based on competition, where law would have the specific role of creating and maintaining the conditions under which competition could function properly. Ordoliberal thinking<sup>184</sup> on the goal of competition law was based on notions of ‘fairness’ and that firm with market power should behave ‘as if’ there was effective competition. Dominant firms were commercially free to compete on the merits. But small and medium-sized enterprises were important to consumer welfare and should receive some protection. Such an objective is consistent with the Indian policies. The Indian Micro, Small and Medium Enterprises Development Act has been enacted ‘to provide for facilitating the promotion and development and enhancing the competitiveness of micro, small and medium enterprises.’<sup>185</sup> The number of micro, small and medium enterprises in India is estimated to be around 361 lakh, which contribute about 37.5% to GDP, over 40% to the manufacturing output and around 40% to the national exports.<sup>186</sup> Thus a competition policy in India will have to protect and foster the small and medium enterprises and not stifle their growth.

This part will develop a theoretical framework, in order to explain why countries like India are in need to following EU approach towards EFD. Refusal to license

<sup>182</sup>See Case C-62/86, *AKZO Chemie BV v Commission* [1991] ECR 1-3359, para 72.

<sup>183</sup>McDonald (n 61) 8–9. See also David J Gerber, *Law and Competition in Twentieth Century Europe: Protecting Prometheus* (Oxford, Clarendon Press 1998).

<sup>184</sup>McDonald (n 183).

<sup>185</sup>The Micro, Small and Medium Enterprises Development Act 2006, No 27 of 2006.

<sup>186</sup>Annual Report 2015–16, Government of India, Ministry of Micro, Small and Medium Enterprises <<http://msme.gov.in/sites/default/files/MEMEM%20ANNUAL%20REPORT%202015-16%20ENG.pdf>> accessed 18 August 2017, which used the data collected in the Fourth All India Census of MSMEs 2006–2007, Government of India, Development Commissioner (MSME), Ministry of Micro, Small and Medium Enterprises <<http://www.dcmsme.gov.in/publications/census10.pdf>> accessed 18 August 2017.

cases could be costlier for India (and other developing nations), where IPR regime is weak, and incurs high transaction costs. Following part shows that EFD is a liability regime, compared to the property regime of voluntary licensing, and compare the two regimes from transaction costs perspective. From theories of bargaining power, it is clear that refusal to license is a result of high transaction costs. Further, chapter also shows, through nontrivial empirical work that refusal to license results from weak IPR regime of the society. This way, authors connect weakness of IPR regime with high transaction cost, and because liability rules are suitable for societies with high transaction costs, there is merit in appreciating the value of EFD in those societies. India is one such society, given the weakness of its IPR regime. Through such analytical framework, this chapter builds a powerful tool of transaction costs as a determinant of deciding, which judicial direction should be taken as regards EFD.

## ***6.1 The Property-Liability Framework as Explained Through Transaction Costs***

An interesting theoretical treatment of ‘need for EFD’ can be developed from property-liability dichotomy.<sup>187</sup> The elegant difference between property rules and liability rules was set in the analytical manner in Calabresi-Melamed’s seminal paper published in 1972.<sup>188</sup> This was an interesting and convincing analytical tool stimulating scholars in various disciplines—most notably in law and economics—to cross-navigate beyond established terminology to appreciate functional and formal differences/congruence between two different areas of law—property and liability.<sup>189</sup> The property-liability rule framework has inspired a range of scholarship in issues related to legal protection of information goods,<sup>190</sup> and has been

<sup>187</sup>This framework is developed in detail, in Padmanabha Ramanujam and Yugank Goyal, ‘One View of Compulsory Licensing: Comparative Perspectives from India and Canada’ (2014) 18(2) Marq Intell Prop L Rev 369.

<sup>188</sup>Calabresi and Melamed (n 13).

<sup>189</sup>It was because of this article, along with his other seminal work in tort law that he is considered to be a founder of law and economics movement, along with Ronald Coase and Richard Posner. Under his influence (he was the Dean of Yale Law School) Yale Law School became one of the leading centre for economics influenced legal scholarship.

<sup>190</sup>See Roger D Blair and Thomas F Cotter, ‘An Economic Analysis of Damages Rules in Intellectual Property Law’ (1998) 39(5) Wm & Mary L Rev 1585 (for demonstrating using Cathedral’s paper how should baseline recovery in case of IP infringement be decided—plaintiff’s damages or defendant’s profits accrued from infringement). For a critical argument utilizing Cathedral paper in favour of injunctive relief in internet context, see Dan L Burk, ‘The Trouble with Trespass’ (2000) 4(1) J Small & Emerging Bus L 27. See also, in context of copyright law, Alex Kozinski and Christopher Newman, ‘What’s So Fair about Fair Use—The 1999 Donald C. Brace Memorial Lecture Delivered at Fordham University School of Law on November 11, 1999’ (1999) 46(4) J Copyright Society USA 513.

extremely useful in understanding copyright collectives,<sup>191</sup> determining appropriate protection of incentives to innovate<sup>192</sup> and explaining relationship between several property, including IP regimes.<sup>193</sup>

Calabresi-Melamed's work differentiates property and liability approach to entitlement in a fairly neat way:

An entitlement is protected by a property rule to the extent that someone who wishes to remove the entitlement from its holder must buy it from him in a voluntary transaction in which the value of the entitlement is agreed upon by the seller. It is the form of entitlement which gives rise to the least amount of state intervention: once the original entitlement is decided upon, the state does not try to decide its value. It lets each of the parties say how much the entitlement is worth to him, and gives the seller a veto if the buyer does not offer enough... Whenever someone may destroy the initial entitlement if he is willing to pay an objectively determined value for it, an entitlement is protected by a liability rule... Obviously, liability rules involve an additional stage of state intervention: not only are entitlements protected, but their transfer or destruction is allowed on the basis of a value determined by some organ of the state rather than by the parties themselves.<sup>194</sup>

Hence, a property rule is a legal entitlement that can be bought only after bargaining with the entitlement holder and the price for the transaction is mutually decided by the buyer (holder) and seller of the right. Under a liability rule on the other hand, a tribunal (third party) will determine the appropriate compensation in an *ex-post* proceeding.

But how does one choose which rule to be employed. Their paper establishes that transaction cost<sup>195</sup> is the primary determinant of that choice. Whenever market transaction costs are low, property rules are preferred; while liability rules are favoured when the transaction costs are high.<sup>196</sup> This is easy to understand. Whether parties can negotiate for the transaction of the right is a direct function of how costly the bargaining process is. In other words, transaction costs will determine whether price discovery will be a result of negotiation or a third party will impose prices it has determined on the basis of (so-called) objective criteria. The doctrine asserts that low transaction costs favour negotiation and reaching a

<sup>191</sup>Robert P Merges, 'Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations' (1996) 84(5) Cal L Rev 1293.

<sup>192</sup>Mark Schankerman and Suzanne Scotchmer, 'Damages and Injunctions in Protecting Intellectual Property' (2001) 32 Journal of Industrial Economics 199.

<sup>193</sup>J H Reichman, 'Legal Hybrids between the Patent and Copyright Paradigms' (1994) 94(8) Colum L Rev 2432.

<sup>194</sup>Calabresi and Melamed (n 13).

<sup>195</sup>Simply put, transaction costs in terms of law and economics are those costs that are incurred in making an economic exchange. These may include search and information costs, bargaining costs, enforcement costs, contracting costs, negotiation costs. Transaction cost economics has led to series of development in law and economics scholarship. See for first theoretical reference to it, Ronald R Coase, 'The Nature of the Firm: Origin' (1988) 4(1) J L Econ & Org 3. See also, Oliver E Williamson, 'The Economics of Organization: The Transaction Cost Approach' (1981) 87 American Journal of Sociology 548.

<sup>196</sup>Calabresi and Melamed (n 13).

Coasian bargain,<sup>197</sup> while high transaction costs will impede any such solution to be achieved.<sup>198</sup> Therefore in case of high transaction costs, parties will not be able to come to a mutually agreeable solution, and hence the need of a third party (tribunal or any government institution) which can declare the damage quantum and ensure the same. Low transaction costs facilitate negotiation and adjustments, so there is no need of a third party to enforce a bargain. The parties themselves can contract mutually. However, when institutional design of voluntary negotiation is ineffective due to high transaction costs, liability rule (third party enforcement) suits best. Low transaction costs would imply that (a) parties to a transaction are easily identifiable to each other, (b) there is no significant difference in bargaining power between the parties so negotiations could conclude favorably, and (c) a third party setting the terms of the exchange would have a difficult time doing so quickly and cheaply, given the specialized nature of the assets and the varied and complex business environments in which the assets are deployed.<sup>199</sup> This approach generally builds the argument that property rules are better suited to protect IP as opposed to liability rules in case of low transaction cost. Liability rules always come with an efficiency loss and their application in presence of low transaction costs does not make sense since the objective can be achieved at a lesser cost. One can imagine such efficiency losses in costs imposed by incomplete information of the third party, inefficient fixation of price, diminished utility of the parties, procedural delays and constraints, administrative expenses, flaws in institutional design, generation of perverse incentives, possibilities of errors, political economy factors, psychological costs or perhaps, the transaction not taking place at all (which happens to be the case many a times). On the other hand, in presence of high transaction costs, liability rules are employed to avoid the danger of adopting a suboptimal solution, a result that flows naturally if Coase theorem is modified and viewed from a non-zero transaction cost perspective.<sup>200</sup> The cost of incorporating liability rule in a property rule set-up is offset by the exercise of the transaction, which should yield a higher optimal outcome.

An EFD framework kicks in, when one of the parties has to be forced to offer access to its facility/facilities. This can be viewed as a standard application of liability rule approach to have a property transaction be concluded. Indeed, if the owner of a facility is principally free to decide who to contract with and who to avoid in sharing the facility, an enforced obligation by either the regulatory

<sup>197</sup>Coase in his seminal article suggested that if initial entitlements are clear, they do not matter in absence of transaction costs. Efficient solution will always be reached no matter who has the entitlement. This is famously called *Coase Theorem*. He proposed that if transaction costs are negligible, parties can effectively negotiate and contract to buy the right. Whoever values it more will get it, and that in fact is efficient solution. See Ronald Coase, 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1.

<sup>198</sup>Calabresi and Melamed (n 13) 1106–8.

<sup>199</sup>Robert P Merges, 'Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents' (1994) 62(1) *Tenn L Rev* 75.

<sup>200</sup>See Coase (n 197) 23.

institutions or competition courts, is imposing liability rule. From theoretical treatment of property-liability framework flowing from Calabresi-Melamed's paper, it is easy to view EFD from the lens of transaction costs.

EFD therefore portrays liability framework because the rights holders are protected by a 'liability rule' (royalty set by the government) instead of a 'property rule' (receipt of an injunction with the rights holder then negotiating the price out with potential buyers).<sup>201</sup> Hence, while EFD stands as a true liability rule, property rule is invoked whenever licenses are given on voluntary basis. From purely legal standpoint, the significant leap that this framework achieves is an alternative view of EFD, justified by theoretical considerations and providing a technical impetus towards sustained usage of the doctrine.

## ***6.2 Refusal to License and Transaction Costs: View from Bargaining Power Differences***

Careful examination of the scope, complexity and quantum of individual transactions involved makes it easier to believe that indeed, transaction costs are very important. These transaction costs rests not necessarily on the ability to identify who owns the property, or on the synchronization of their willingness to pay and accept, but on the difference in bargaining power between the contracting parties. To elaborate on this, authors rely on simple economic framework of bargaining power.

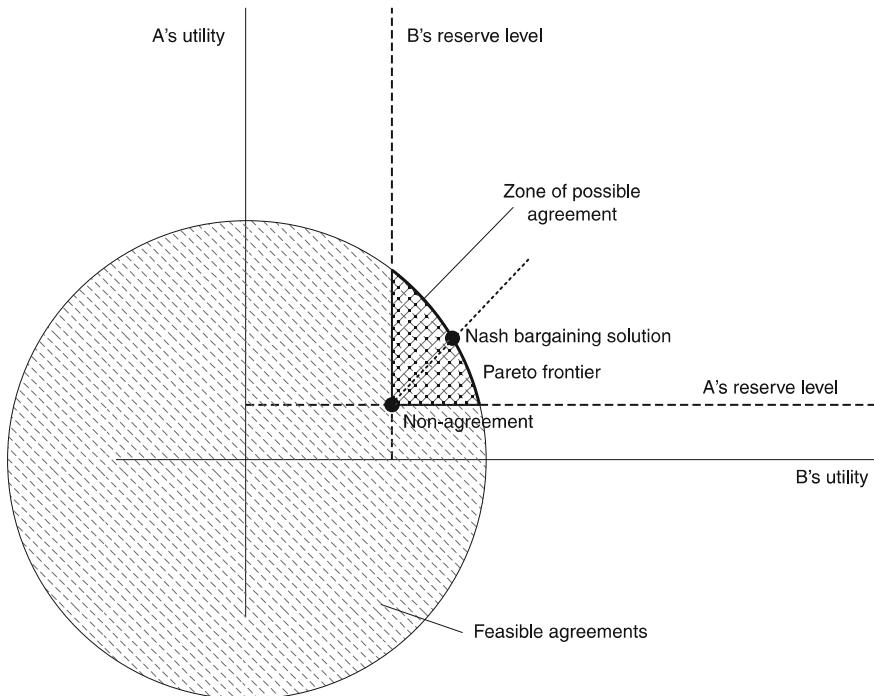
Consider a bargaining space in Cartesian coordinate framework as illustrated in Fig. 1, as simple representation of bargaining space.<sup>202</sup> A and B are two players who have their respective reserve levels in the absence of reaching any agreement (or concluding a bargaining process successfully). These reserve levels can be considered as initial endowments. The X-axis shows the utility that B receives in executing the agreement and Y-axis refers to utility of A—this also shows preference orders of both parties—A wants the agreement to be reached as high up along Y-axis, while B would like to stretch bargaining to take the agreement as far along X-axis.

The circle shows all possible sets of outcomes possible. But the bargaining can happen only in the zone of possible alternatives where players are better off in reaching an agreement than without it. This space in Fig. 1 is shown by cross-hatched area. Bargaining can conclude anywhere in this space. A subset of this space from where no further gains are possible without incurring at least one of the players lose is called Pareto frontier, denoted by the arc in the bargaining space. Movement towards the frontier creates value for both parties (even if in different sizes) and movement along the frontier changes redistributes the surplus. The Nash

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<sup>201</sup>Calabresi and Melamed (n 13).

<sup>202</sup>See Andreas Wamten, 'Bargaining', *Encyclopedia of Power* (1st edn, 2011).



**Fig. 1** Bargaining Space with reserve levels and Nash Bargaining Solution (NBS)

bargaining solution (NBS) in the figure is also shown, which is a Pareto efficient solution to this problem.<sup>203</sup>

Bargaining power also stems from events outside the bargaining process. This is the concept of outside options in a bargain.<sup>204</sup> Outside options are those events that may affect the player's behaviour towards bargaining process. Mathematical models are shown in which actors restrict the bargaining space in their favor by eliminating some unfavourable outcomes as principally unacceptable.<sup>205</sup> A new

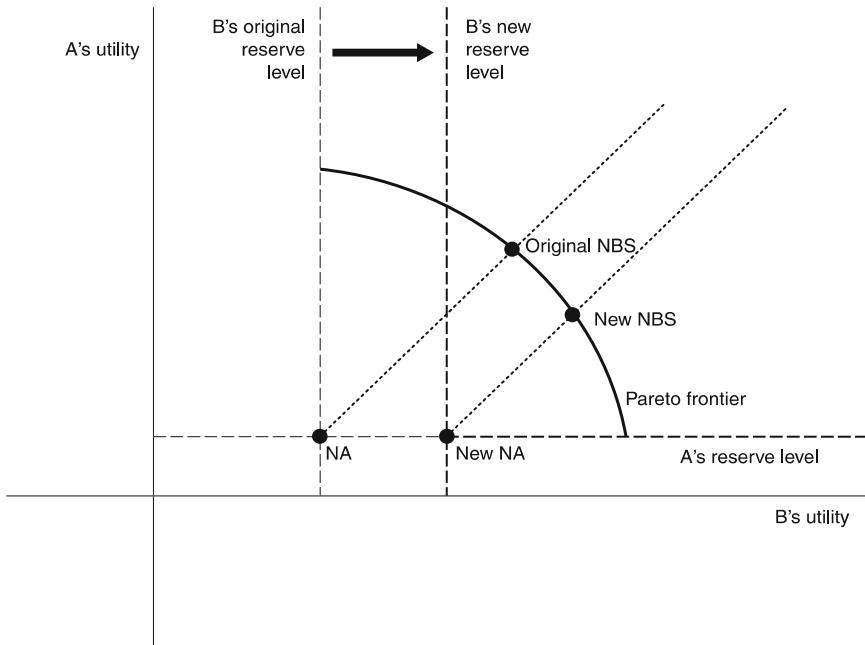
<sup>203</sup>Nash bargaining solution is an approach to find how is the bargaining surplus split between the parties, and follows cooperative game theory. Mathematically, in mathematical terms, is a solution that satisfies: (a) independence to affine transformations, (b) Pareto optimality, (c) independence of irrelevant alternatives, and (d) symmetry. The seminal paper in this regard is John F Nash, 'Equilibrium Points in N-Person Games' Proceedings of the national academy of sciences 36.1 (1950) 48. Even non-cooperative game theory yields surprisingly similar solutions, under appropriate conditions.

<sup>204</sup>See Avner Shaked and John Sutton, 'Involuntary Unemployment as a Perfect Equilibrium in a Bargaining Model' (1984) 52 (6) *Econometrica* 1351. Martin J Osborne and Ariel Rubinstein, *Bargaining and markets* (Academic Press, San Diego 1990). Clara Ponsatí and József Sákovics, 'Rubinstein Bargaining with Two-Sided Outside Options' (1998) 11 (3) *Economic Theory* 667.

<sup>205</sup>See also Thomas C Schelling, *The Strategy of Conflict* (Cambridge MA: Harvard University Press 1960).

outside option tends to increase the non-agreement value for one player, and this player achieves a higher bargaining power during the transaction. The outside options increase reserve utility or initial endowment of the player. This pattern is easy to visualise from Fig. 2, where the new NBS has shifted to the right, in favor of B, because B's initial endowment increased. If the reserve levels increase further, they can actually fall outside the bargaining space, meaning player B will not engage into the bargaining process at all, since payoffs in no-agreement are higher for her, compared to the payoffs in any agreeable situation.

This is exactly what happens in a situation where EFD comes into picture. The transaction costs of engaging into bargaining are so high that property rule approach ceases to act. Liability rule takes over, and solutions are sought after a third party's intervention. Even though the owner of the facility can take license fee for access to its facility to another party, the total surplus it can gain by retaining/capturing its dominant position in the market is much larger than the revenues accrued from licensing fee. This is indeed, a social loss. The solution therefore comes in the form of an involuntary contract enforced by a third party, invoking EFD. The government authorises itself to allow other parties to use the facility, without the voluntary consent of the owner of the facility, and sets out to dictate licensing agreements and fees. In these cases, the public interest in broader access to the invention is



**Fig. 2** Outside option shifts bargaining solution in favour of the player, which has increased initial endowment/reserve level

considered more important than the private interest of the right holder to fully exploit his exclusive rights.<sup>206</sup>

The preceding discussion helps us imagine refusal to license as an act of a party, which has very high bargaining power, relative to the other party. If the difference in bargaining power of randomly selected transacting parties in a society is fairly high, it can be understood to be reflective of high transaction costs of the society.<sup>207</sup> This is evident in say, feudal or rural societies where the difference in bargaining power forces non-elites to be evicted from the market and transactions between elites and non-elites become unaffordable for the non-elites.<sup>208</sup> In similar vein, the structure of transaction costs can be understood from how a large difference in bargaining power exists between transacting parties. In other words, bargaining power differences act as a robust proxy for how high transaction costs are, in a society.

### **6.3 *Strength of IPR Regime as Explained through Occurrence of Refusal to License***

From the preceding discussion it can be concluded that (a) liability approach is warranted if the transaction costs are high, and (b) high transaction costs result in refusal to license. Refusal to license is a proxy to understand the strength of IPR regime of a society.

A license is a commercial contract between licensor and licensee. Primarily, it specifies two basic features—the subject material which has an intellectual property (IP) and functional use of the subject material. The licensee compensates the licensor for use of licensed subject by a flat fee (lump-sum) and/or through royalties based on income earned by the licensee. The royalty rate can be fixed or varying percentage of licensee's value of output, units of output, profits or sales.<sup>209</sup> Licensees save the expense of independent research and development (R&D) for the licensee and licensor derive fees and royalties.

<sup>206</sup>See for compulsory licensing, Jerome H Reichmann and Catherine Hasenzahl, 'Non-Voluntary Licensing of Patented Inventions' UNCTAD-ICTSD Project on IPRs and Sustainable Development (Issue Paper No 5 June 2003) <<http://www.iprsonline.org/resources/docs/Reichman%20-%20Non-voluntary%20Licensing%20-%20Blue%205.pdf>> accessed 19 August 2017.

<sup>207</sup>See Duncan Kennedy, 'Distributive and Paternalist Motives in Contract and Tort Law with Special Reference to Compulsory Terms and Unequal Bargaining Power' (1982) 41(4) Md L Rev 563 for Inequality of bargaining power.

<sup>208</sup>ibid. Jim Chen, 'The Nature of the Public Utility: Infrastructure, the Market, and the Law' (2004) 98(4) Nw U L Rev 1617 which dwells upon the premise that rural markets are high in cost, from a consumer-service provider bargaining perspective. However, an analogy can be drawn with competitors in rural or feudalistic societies relying upon the notion of unequal bargaining power increasing the transaction cost.

<sup>209</sup>For a useful working description, see Alan S Gutterman, *The Law of Domestic and International Strategic Alliances: A Survey for Corporate Management* (Quorum Books, Westport, CT 1995). See also Bharat N Anand and Tarun Khanna, 'The Structure of Licensing Contracts' (2000) 48 Journal of Industrial Economics 103.

If IPR regimes are strong—respect for property rights is high, identification of right holder and contours of rights is clear, uncertainties and bargaining costs are low, enforcement is high and there is emphasis on incentives to innovate over access, there is low likelihood that licenses will be reduced. This is simply because as long as willingness to pay is higher than willingness to accept, the trade will happen, and there are no intervening factors that can thwart it. All intervening factors for transaction to be successful—in strong IPR structures—favour the transaction, keeping the costs low. On the other hand, weak IPR regimes are characterised by under-enforcement, blurred and uncertain scope of rights, impetus on access rather than innovation, thinly designed institutions, lack of political will to make IPR stronger and high bargaining costs (which leads to stealth and piracy). In such societies, licensing will be difficult to achieve due to prevalent uncertainty and nebulous character of how rights are drawn. People have incentives to simply get around the system rather than engaging into negotiation. Intuitively also, it is not difficult to understand why licensing thrives in strong IP regimes.<sup>210</sup> Since stealing is cheaper, and observing infringement is costly, it builds incentives to refuse license. In extreme situations, it leads to situations that invoke EFD.

There have been several studies taking different approaches but arriving at the same conclusions. In 1984, Farok Contractor attempted to correlate patent protection and licensing using cross-sectional data, which explained the determinants of the ratio of receipts in the US of royalties and licensing fees from unaffiliated sources to various measures of direct investment activity.<sup>211</sup> The study defined patent intensity of a nation by flows of new patents in force. Technology transfer on the other hand was used as proxy for licensing. The study found that patent protection did attract licensing. The argument behind this observation is that patent protection increases the income extractable from licensing. In another well-cited study, Edwin Mansfield established<sup>212</sup> that multinationals are less likely to engage in technology transfer (licensing) with firms of countries where IP protection is weak.<sup>213</sup> In yet another study, Pamela Smith infers<sup>214</sup> that the effect of stronger

<sup>210</sup>For an elaborate theoretical discussion that started very early on, see Nancy T Gallini, ‘Patent Policy and Costly Imitation’ (1984) 23 *Rand Journal of Economics* 52.

<sup>211</sup>Farok J Contractor, ‘Choosing Between Direct Investment and Licensing: Theoretical Considerations and Empirical Tests’ (1984) 15 *Journal of International Business Studies* 167.

<sup>212</sup>Edwin Mansfield, ‘Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer’ (International Finance Corporation 1994) Discussion Paper No 19 <<http://documents.worldbank.org/curated/en/888591468739296453/pdf/multi-page.pdf>> accessed 27 September, 2017.

<sup>213</sup>However, this finding depends on the industry or nature of the technology. US firms in the chemicals and electronics industries appeared to place a greater emphasis on intellectual property protection, whereas firms in the metals and transportation industries were seen to be less reliant on it. *ibid* 2.

<sup>214</sup>Pamela Smith, ‘How Do Foreign Patent Rights Affect US Exports, Affiliate Sales, and Licenses?’ (2001) 48 *Journal of International Economics* 151.

IPRs on international licensing depends on the imitative capabilities of host countries, by drawing on cross-sectional data on US multinationals' licensing activities in 50 countries.<sup>215</sup>

Even after extending the scope and methodology, it is found that strong patent rights and licensing activities are positively correlated. Yang and Maskus extended the analysis of US foreign licensing to a panel data set covering three time periods (1985, 1990 and 1995) and 23 partner countries, of which approximately ten are emerging market economies. They found that countries with stronger patent rights attract larger volumes of licensed technology.<sup>216</sup> More recently, Michael Nicholson finds that R&D intensive firms are more apt to license when patent protection is strong.<sup>217</sup> His approach—which involved cross-sectional empirical analysis and it pools together data for 1995 from 49 destination countries and 82 industries—was to focus on count data rather than value data.

While previous studies were using Bureau of Economic Analysis aggregated industry or national level data, Branstetter and others conducted a study using Bureau of Economic Analysis micro-data. A key finding was that IPR reforms—signifying strength of patent protection—stimulate US firms to license abroad to affiliated parties.<sup>218</sup> Anand and Khanna attempted to explore how much is licensing dependent on IPR protection levels. The study employed data on international licensing contracts from the Joint Ventures and Strategic Alliances database of the Securities Data Company,<sup>219</sup> and founds that while in some sectors (semiconductor), the dependence is low, but in many others (pharmaceutical and chemical, for instance), IPR levels significantly determine activity in licensing.<sup>220</sup>

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<sup>215</sup>In situations where imitative risk is low, stronger IPRs serve primarily to raise rents to rights holders. In countries where imitative capabilities are high, stronger patent rights stimulate licensing to unaffiliated foreign firms.

<sup>216</sup>Guifang Yang and Keith E Maskus (2001), 'Intellectual Property Rights and Licensing: An Econometric Investigation' (2001) 137 *Weltwirtschaftliches Archiv* 58.

<sup>217</sup>Michael Nicholson, 'The Impact of Industry Characteristics on International Technology Transfer' (2003) Bureau of Economics, Washington, DC, Federal Trade Commission Working Paper as referred to in Keith E Maskus, *Intellectual Property, Growth and Trade: Frontiers of Economics and Globalization*, vol 2 (Emerald Group Publishing Limited 2007).

<sup>218</sup>Lee G Branstetter, Raymond Fisman and C Fritz Foley, 'Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U. S. Firm-Level Panel Data' (2006) 121 (1) *The Quarterly Journal of Economics* 321.

<sup>219</sup>Anand (n 209).

<sup>220</sup>See, however, Andrea Fosfuri, 'Country Risk and the International Flows of Technology: Evidence from the Chemical Industry' (2000) Universidad Carlos III de Madrid Working Paper <<https://e-archivo.uc3m.es/bitstream/id/63/wb022514.pdf/>> accessed 11 May 2018. This paper established weak effects of IPRs on international licensing and found that patent rights have an insignificant or negative effect on licensing. It used firm-level data for the world chemical industry. However, this study was focusing only on firms with process innovations. And for such innovations, patents may not be the most effective mechanism. In fact, it has been noted that biotechnology—a standard process innovation—firms prefer trade secrecy to patent protection. See, eg, Nikolaus Thumm, 'Research and Patenting in Biotechnology: A Survey in Switzerland' (2003) Swiss Federal Institute of Intellectual Property, Publication No 1 (12.03)

A research conducted by OECD,<sup>221</sup> deserves our special attention because of its elaborate methodology, recent nature and effectiveness of control variables.<sup>222</sup> This study considered the relationship between strengthening of IPR and licensing activities, particularly in 1990s, in developing countries. It employed a regression analysis to draw on an international data set to consider the relationship over time between changes in the host-country patent regime and changes in the number of licensing transactions between developed and developing countries. The strength of IPR was measured by different IP index, like patent rights,<sup>223</sup> copyrights<sup>224</sup> and trademarks,<sup>225</sup> and finally the fourth index examines enforcement effectiveness.<sup>226</sup> The study finds general support for the proposition that strengthening of IPRs has a net positive effect on technology transfer via licensing. It is interesting to note that licensing fees and royalties were found to vary positively with stronger patent rights and effectiveness of the enforcement.<sup>227</sup>

## ***6.4 Connecting the Variables***

The three analytical statements are:

- (a) Liability rules are favored in high transaction cost scenario (and low transaction costs are fertile for property rule approach)

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<[https://www.ige.ch/fileadmin/user\\_upload/dienstleistungen/publikationen\\_institut/j10005e.pdf](https://www.ige.ch/fileadmin/user_upload/dienstleistungen/publikationen_institut/j10005e.pdf)> accessed 11 May 2018. Process innovations are harder to enforce compared to product innovations.

<sup>221</sup>Walter Park and Douglas Lippoldt, 'The Impact of Trade Related Intellectual Property Rights on trade and Foreign Direct Investment in Developing Countries' (OECD Papers, Paris 2003) Special Issue on Trade Policy, vol 3 No 11, Paper No 294.

<sup>222</sup>The study is conducted first using aggregate data, then the firm-level data. Variables that needed controlling were, for e.g., gross productivity, corruption, tariff rates and country risks.

<sup>223</sup>The measure of patent rights index was taken from Juan C Ginarte and Walter G Park, 'Determinants of Patent rights: A Cross National Study' (1997) 26 Research Policy 283; and Walter G Park and Smita Wagh, 'Chapter 2: Index of Patent Rights' in James Gwartney and Robert A Lawson (eds), *Economic Freedom of the World Annual Report 2002* (Fraser Institute, Vancouver, BC 2002) 33–42 <<https://object.cato.org/pubs/efw/efw2002/efw02-ch2.pdf>> accessed 11 May 2018.

<sup>224</sup>Copyrights index is taken from Taylor W Reynolds, 'Quantifying the Evolution of Copyright and Trademark Law' (doctoral dissertation paper, American University 2003).

<sup>225</sup>ibid.

<sup>226</sup>No formal study has been done to measure enforcement effectiveness, but some information collected by Park and Lippoldt comes from reports filed with US Trade Representatives. See the annual USTR reports entitled *National Trade Estimate: Report on Foreign Trade Barriers* <[https://ustr.gov/archive/Document\\_Library/Section\\_Index.html](https://ustr.gov/archive/Document_Library/Section_Index.html)> accessed 27 September 2017.

<sup>227</sup>Copyrights and trademarks rights were found to exercise comparatively weak influences. This may be due to a number of factors, which don't merit our attention here, except that there needs to be due appreciation of diverse nature of these intellectual properties and therefore one must understand that they deserve to be treated differently.

- (b) High transaction costs (emerging from difference in bargaining power) lead to refusal to license,
- (c) Refusal to license reflects weak IPR regimes

Therefore, as a corollary, it follows that

- (d) Weak IPR regimes need to adopt liability rules.

This forms the central message of our theoretical treatment. With considerations made in the analysis—which reasonably elaborate on underlying principles—this framework has potential to aid to the existing discourse by adding new dimension to the debate. Once EFD is understood as a liability approach, a country's IPR strength can be investigated and performance to devise a general approach towards EFD, and varying the narrowness in which EFD clauses can be interpreted both at judiciary and executive level.

## **6.5 Why is Indian IPR Regime Weak?**

From historical standpoint, Indian intellectual tradition has been fairly open in terms of access.<sup>228</sup> The concepts of IP emerged only during colonial rule, and even today, legislative construction has been largely modeled on British statutes. In fact, the emergence of IP globally has been considered purely a European idea, emerging in seventeenth century, strengthening through late nineteenth and twentieth century aided by American impetus, and being transported to non-Western nations through international treaties.<sup>229</sup>

The Indian copyright law closely parallels the development of the same law in England. The Copyright Act 1914 of India was basically, an extension of British Copyright Act 1911; just like the present Copyright Act 1957 is borrowed extensively from Copyright Act of the United Kingdom of 1956.<sup>230</sup> This gives it a *de jure* color of copyright protection, but a *de facto* culture of fearless infringement. According to studies commissioned by Motion Picture Distributors' Association (local office of Hollywood's Motion Picture Association), India tops the chart for maximum film piracy in English-speaking world.<sup>231</sup> In 2012, the US Trade Representative's highest Priority Watch List had figures India amongst thirteen

<sup>228</sup>There were restrictions based on caste. But that does not affect our analysis here, since the focus is not on reach of access but how is access provided.

<sup>229</sup>See, eg, Peter Drahos, 'The Universality of Intellectual Property Rights: Origins and Development' (1998) WIPO Panel Discussion on Intellectual Property and Human Rights.

<sup>230</sup>The latest amendment was done in 2012, which even though attempts to curb piracy strongly, is still embedded in the existing structure.

<sup>231</sup>Utpal Borpujari, 'India Major Online Film Piracy Hub' *Deccan Herald* (New Delhi, 15 December 2009) <<http://www.deccanherald.com/content/41541/india-major-online-film-piracy.html>> accessed 27 September 2017.

countries with huge online piracy.<sup>232</sup> It continues to remain so.<sup>233</sup> Story of trademarks is also similar, with huge counterfeit market of goods emerging in India even though two experiments with re-institutionalizing the relevant statutory laws.<sup>234</sup> In fact, earlier studies indicate similar pattern—study sponsored by Ministry of Human Resource and Development of Indian government, copyright piracy has been noted to be significantly high.<sup>235</sup> Socially, this is catapulted from very high levels of poverty and affordability issues. In fact, a strict enforcement of copyright will evict substantial amount of population from accessing copyrighted material and therefore political will to curb infringement is rather low—contextually reasonable. And hence, it is not surprising that through efforts of India, which led the developing nations to adopt Stockholm Protocol of 1967 that enables developing countries to adopt greater access for copyright materials; the Protocol's adoption created a crisis in international copyright.<sup>236</sup> In its own legislation, India has exempted significant number of uses of copyright material exempted from infringement.<sup>237</sup> The wide interpretation of this fair dealing clause as illustrated in the Act itself gives considerable latitude for accessing copyrighted material without payment. In fact, Consumer International rated Indian Copyright Act 1957 at top position (2009 and 2010) in terms of enabling access to knowledge.<sup>238</sup>

Evolution of patent laws is not very different, principally. Pharmaceutical patents were first introduced by the British in 1856.<sup>239</sup> This translated to heavy influence of

<sup>232</sup>See The Deadline Team, 'Familiar Names on US Piracy Watchlist as Online Theft on Rise' (*Deadline*, 30 April 2012) <<http://www.deadline.com/2012/04/familiar-names-on-u-s-piracy-watchlist-as-online-theft-on-rise/>> accessed 27 September 2017.

<sup>233</sup>See Nayanima Basu, 'India Likely to Remain Under 'Priority Watch List' in US IPR Report' (*The Hindu BusinessLine* (New Delhi, 11 January 2017)) <<http://www.thehindubusinessline.com/economy/india-likely-to-remain-under-priority-watch-list-in-us-ipr-report/article9474144.ece>> accessed 28 September 2017.

<sup>234</sup>The first statutory design was Trade Marks Act 1940, modeled on the UK Trade Marks Act 1938. With certain modifications, The Trade and Merchandise Marks Act, 1958 came into force, which was repealed by Trade Marks Act 1999. For newspaper coverage of recent trademark infringement <<http://articles.economictimes.indiatimes.com/keyword/counterfeit-products>> accessed 28 September 2017.

<sup>235</sup>Findings of the study can be accessed online N K Nair, A K Barman and Utpal Chattopadhyay, 'Study on Copyright Piracy in India' (1999) National Productivity Council, Ministry of Human Resource Development <<http://copyright.gov.in/Documents/STUDY%20ON%20COPYRIGHT%20PIRACY%20IN%20INDIA.pdf>> accessed 27 September 2017.

<sup>236</sup>See H Sacks, 'Crisis in International Copyright: The Protocol Regarding Developing Countries' (1969) *Journal of Business Law* 26.

<sup>237</sup>s 52 of Indian Copyright Act 1957 mentions an extensive list of actions that will not amount to infringement. See <<http://copyright.gov.in/Documents/CopyrightRules1957.pdf>> accessed 20 September 2017.

<sup>238</sup>See <<https://cis-india.org/a2k/ci-ip-watchlist-report-2012>> for an extensive report on India. For Consumer International's IP Watch List, visit, Consumer International's website. Its 2009 IP Watch List can be found at <<https://www.opensocietyfoundations.org/sites/default/files/ip-watchlist-20100220.pdf>> both accessed 25 September 2017.

<sup>239</sup>See Parameswaran Narayanan, *Patent Law* (Kolkata Eastern Law House 2006).

foreign firms (which controlled 70% of Indian market),<sup>240</sup> and high drug prices.<sup>241</sup> The realization came in 1970, when India enacted Indian Patents Act 1970, that prohibited product patent on medicines. This Act has acted as the main thrust to India's pharmaceutical industry,<sup>242</sup> leading to steep fall in number of patents granted.<sup>243</sup> Although law permitted process patents on medicines,<sup>244</sup> it was rarely sought and had limited scope.<sup>245</sup> This therefore gave rise to a number of local pharmaceutical firms increasing their share of the market.<sup>246</sup> Indian firms employed reverse engineering and developed new processes for the drugs. Over the next three decades, Indian pharmaceutical industry became extremely competitive and diverse<sup>247</sup> and by 1990s, India started producing the most inexpensive medicines in the world.<sup>248</sup> The situation changed after TRIPS to which India opposed initially,<sup>249</sup> but finally acceded. However, it incorporated several flexibilities that the TRIPS allow, notably that of compulsory licensing. Overall, India is labeled 'pharmacy of the developing world'<sup>250</sup> due to its extremely access-friendly patent laws rather than rights-friendly structure. Even though the Patents (Amendment) Act 2005, being TRIPS-complied, has stricter provisions for rights, the reality has not changed

<sup>240</sup>P K Ramachandran and B V Rangarao, 'The Pharmaceutical Industry in India' (1972) 7 Economic and Political Weekly 27.

<sup>241</sup>Staff of Senate sub-committee on Antitrust and Monopoly 87th Congress, 1st Session, Rep No 448 (27 June 1961), which showed India with the highest prices of the seventeen countries surveyed, which included the United States. See, for report and other aspects of the sub-committee, Daniel D Adams and William E Nelson, 'The Drug Amendments of 1962' (1963) 38(6) NYU L Rev 1082.

<sup>242</sup>Jean O Lanjouw, 'The Introduction of Pharmaceutical Product Patents in India: Heartless Exploitation of Poor and Suffering' (Economic Growth Center, Yale University 1997) Center Discussion Paper No 775 <<https://www.econstor.eu/bitstream/10419/98364/1/cdp775.pdf>> accessed 11 May 2018.

<sup>243</sup>ibid.

<sup>244</sup>See The Patents Act 1970, s 53(1) (a). For example, such patents only lasted for the shorter of five years from the date of grant or seven years from the date the patent was filed.

<sup>245</sup>H Ashok Chandra Prasad and Shripad Bhat, 'Strengthening India's Patent System: Implications for Pharmaceutical Sector' (1993) 28 Economic and Political Weekly 1037.

<sup>246</sup>This was accompanied by other regulatory and policy measures that the government took to encourage building local markets against foreign firms.

<sup>247</sup>For an overview of how pharmaceutical industry developed after patent law was enacted, see Sudip Chaudhuri, *The WTO and India's Pharmaceutical Industry: Patent Protection, TRIPS and Developing Countries* (Oxford University Press, New Delhi 2005); and Aradhna Aggarwal, 'Strategic Approach to Strengthening the International Competitiveness in Knowledge Based Industries: The Indian Pharmaceutical Industry' (Research and Information System for Developing Countries 2004) Discussion Paper No 80 <[http://ris.org.in/sites/default/files/pdf/Dp80\\_pap.pdf](http://ris.org.in/sites/default/files/pdf/Dp80_pap.pdf)> accessed 20 September 2017.

<sup>248</sup>ibid.

<sup>249</sup>George K Foster, 'Opposing Forces in a Revolution in International Patent Protection: The US and India in the Uruguay Round and its Aftermath' (1998) 3(1) UCLA J Int'l L & Foreign Aff 283.

<sup>250</sup>Leena Menghaney, 'Patent Dispute: Delhi High Court Gives a Boost to Access to Affordable Medicines' (2010) 7 Indian Journal of Medical Ethics 97.

significantly. Indian law per se does not allow patents for softwares (it has copyright for softwares) and business methods. Until 2008, merely 22 cases in Supreme Court and High Courts in India dealt with the important issue of revocation of patents (Section 64)—showing not only dismal awareness and litigiousness of IPR cases,<sup>251</sup> but also highlights that the general framework indicates weakness of IPR regime.

WIPO's Global Innovation Index Ranking 2017 places India at 60th position, below several East European and Middle East nations.<sup>252</sup> That this may be a result of weak IPR regime needs further qualification, but if standard theory is correct, there is definitely some correlation. Scholars have constructed an index of patent rights and have shown that the index is highly correlated with per capita GDP, accordingly Global North (producers of innovation) typically provide stronger patent protection than their counterparts in the Global South (consumers of innovation).<sup>253</sup> India, which clearly falls under the 'consumers of innovation' category, makes it abundantly evident that it is characterised by weak IPR regime.

## ***6.6 Therefore, India needs EFD Expansively***

The above finding, when placed in our analytical skeleton of viewing EFD through transaction cost network, reaffirms the view that India requires a proactive approach towards EFD. Since weak IPR regimes require liability approach, and India's IP regime is indeed weak, there is compelling reason that it adopts an extensive manner to interpret EFD through competition authorities. Since regulatory agencies assume the responsibility to police firms in their jurisdiction to ensure that facilities, which are essential, not be refused to share, given certain conditions, there is a need for such regulatory agency in the domain of IPR as well. IPR has significant spillover effects due to its—basically—a public good nature. And it has dramatic consequence for shaping the contours of competition in a relevant market. In fact it is surprising to imagine that competition authority has not been able to realise its true role and potential, in perhaps the same way as it has been done by regulatory agencies of network goods in infrastructure. Given the theoretical framework developed in this chapter, there is no need for CCI to be painfully cautious in engaging with market players who seem to advocate their rights to IP trumping everything else. At multiple levels, the CCI needs to be proactive in an evolving competition law regime, and developing oversight to an important area of EFD will create poor precedents for future.

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<sup>251</sup>Although this has been changing rapidly. See, Sehba Hussain, 'The Intellectual Property Rights-What do Indians Perceive' (2009) 5 International review of Business Research Papers 315.

<sup>252</sup>World Intellectual Property Organization, Global Innovation Rankings <[http://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_gii\\_2017.pdf](http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf)> accessed 27 September 2017.

<sup>253</sup>Ginarte and Park (n 223).

## 7 Conclusion

In certain ways, the chapter's contribution is straightforward. Given the characteristic of the doctrine being heavily inspired from case laws across US and EU, there is a considerable lesson that can be drawn by studying how the case laws evolved and what are the pivots of differences between diverse approaches adopted by US and EU. Once the case laws are distilled over time, it becomes easy to observe the legislative designs in light of case laws as they have emerged. This gives us a clue towards generalizing framework of approach in India. The real lacuna where academic intervention is sought remains in the IP driven model of EFD. This is modeled through the property-liability conceptualization. Authors borrow from the concept of bargaining cost, the tool of transaction costs and positioning it—as it has been in the Calabresi and Melamed's paper—within the property-liability framework. The idea of bargaining power helps us develop the tool of transaction costs which can squarely suit the purpose of EFD. The authors conclude that for countries where strength of IPR is low, the doctrine needs broader interpretation. This is true for India, and is easily transportable to other developing nations.

The chapter in no way makes an argument towards completeness of the model, in explaining factors on which characteristics of EFD depends. Indeed, a host of other factors determine the doctrine, including royalty fee, duration, scope, legal framework, international obligation, expected hit in FDI, market potential, public funds towards innovation and the like. The chapter attempts to create a discourse on one of the fundamental grounds of EFD, namely the transaction costs and issue of public interest. This alone has several important principles endogenised. More importantly, there is a general policy principle flowing from the analysis, which calls for attuning liberty in EFD with the strength of the IPR framework of the country. For instance, if the property rights are strong, it calls for a conservative and narrow interpretation of the doctrine, perhaps as is the case in US.

In addition, like any analytical framework, our methodology does come with its inherent limitations. The model crucially rests on property-liability framework elucidated in Calabresi and Melamed's paper. That model, in turn, pivots on transaction cost economics. Considerable work has been done since then in categorization, structural layering and re-inventing the concepts of transaction costs. The contextual application of transaction cost economics is, while very important, our model does depend largely on the *value* of the transaction costs. These values are difficult to collate, and hence most studies do not go deeper into classifications of transaction costs. It does merit the question of what happens if the transaction costs vary greatly in a country from across regulations affecting the same industry. In addition, although extremely comprehensive, existence of only two categories—low and high transaction costs—obscures subtle nuances in mid-level transaction costs. This however, could be an interesting territory lying unchartered, which could further aid to the development of this scholarship.

The principle does not imply that courts should take into account the IPR strength and weakness of a society before adjudicating on an issue of refusal to license. However, it assumes a twofold role: firstly, a conciliatory role, where scholars and society becomes sympathetic towards a judgement that invoked the doctrine in a competition law case favoring the plaintiff; and secondly, a predictor role, where the doctrine's application could be expected in societies where strength of IPR is rather low. In this way, the chapter proposes guiding principle to decide which side of policy outcome, should the policy maker tilt her options, using the legal tool of EFD.

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# Chapter 15

## Local Working of Patents: The Perspective of Developing Countries



Althaf Marsoof

### 1 Introduction

A patent grants exclusive rights to a patentee enabling the exploitation of the underlying invention for a prescribed period of time—the usual being 20 years. This means that no one but the patentee, or a person authorized, will be entitled to produce the goods, or provide the services, to which a patented invention relates. Thus, a monopoly limited by time, over the manufacturing, production, sale, importation and distribution of the patented product is conferred to the patentee and no other. The purpose of this chapter is to investigate whether the imposition of a requirement which compels a patentee to set up a local industrial plant or factory to produce the patented product, or apply the patented process, in essence compelling the local working of a patent, as a condition for the maintenance of exclusive patent rights is compatible with the Agreement on the Trade Related Aspects of Intellectual Property (TRIPS), which forms one of the several covered agreements of the World Trade Organization (WTO). In particular, the analysis will deal with the principle of non-discrimination enshrined in Article 27:1 of TRIPS and its apparent inconsistency with Article 5A(2) of the Paris Convention for the Protection of Industrial Property 1883 (Paris Convention), and then pose the question whether the imposition of a local working requirement would be compatible with the principle of non-discrimination enshrined in Article 27:1 of TRIPS. The last part of the chapter considers the approaches adopted in India and Sri Lanka in relation to the local working of patents, as these South Asian jurisdictions share similarities with many others that are both agricultural and developing economies, while also demonstrating a significant divergence in their domestic approaches towards local working.

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## 2 What Is ‘Local Working’?

The exclusive rights that emanate from the grant of a patent is territorial in nature. As such, an inventor is required to obtain patent protection in all countries in which the invention is to be exploited making use of national registration processes and the right to priority. From the point of view of a country granting such exclusive patent rights, a local working requirement would oblige the patent holder to ‘work’ the patent locally, as opposed to merely using the patent ‘as an exclusive right to prevent others from doing so or to control importation.’<sup>1</sup> Essentially, the local working of a patent entails that the ‘patentee must manufacture the patented product, or apply the patented process, within the patent granting country.’<sup>2</sup> The local working of a patent would bring about significant benefits to the country granting the patent, including but not limited to increased employment opportunities, transfer of technology and development of skills and expertise of human resources. Thus, in turn, and without doubt, working a patent locally will be useful for the dissemination of knowledge on the technology surrounding the patent, which would provide the know-how for the patent granting country to develop further and experiment on better uses of the technology involved. It has been suggested that the local working of patents is ‘desirable from the patent granting country’s point of view because they contribute to a variety of public policy goals such as employment creation, industrial and technology capacity building, national balance of payments, and economic independence.’<sup>3</sup>

On the other hand, requiring a patent owner to set up industrial plants in every country in which an invention is to be exploited would result in increased expenses, thus potentially reducing the yield of profit. Although through licensing arrangements, a patent owner could grant a local entity the right to produce a patented product, or apply a patented process, in local industrial plants or factories, this may still be less efficient than simply importing the patented product, manufactured in a single or multiple plants or factories elsewhere, into the patent granting country.<sup>4</sup> This may also result in innovators distancing themselves from the patent system, while choosing to protect their inventions as trade secrets instead. Thus, any discussion as to the viability of imposing a local working requirement must consider these competing interests. Most importantly, however, one would have to consider whether a measure requiring the local working of a patent as a condition to maintain exclusive rights detracts from the cardinal rule against discrimination enshrined in Article 27:1 of TRIPS.

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<sup>1</sup>GHC Bodenhausen, *Guide to the application of the Paris Convention for the Protection of Industrial Property* (WIPO Publication 1969)71 (emphasis added).

<sup>2</sup>M Halewood, ‘Regulating Patent Holders: Local Working Requirements and Compulsory Licenses at International Law’ (1997) 35(2) Osgoode Hall Law Journal 243.

<sup>3</sup>ibid 246.

<sup>4</sup>GB Reddy and Harunrashid Kadri, ‘Local Working of Patents—Law and Implementation in India’ (2013) 18 Journal of Intellectual Property Rights 15.

This chapter by no means postulates a blanket requirement under national law that requires the local working of patents, as a precondition for the maintenance of patent rights. As is pointed out in this chapter, such an approach would be contrary to the non-discrimination obligations of WTO Members under Article 27:1 of TRIPS. Rather, what is required is a cautious exercise of TRIPS flexibilities towards a local working requirement that is case and context specific—thus, balancing the interests of patentees, as well as stakeholders in the patent granting country.

### 3 The Principle Against Discrimination and the Local Working Requirement

An important question that needs to be addressed is whether the imposition of a local working requirement conflicts with a WTO Member's obligations under TRIPS. In order to respond to this, it is necessary to consider the principle against discrimination set out in Article 27:1 of TRIPS. Article 27:1 reads as follows:

Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, *patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced* (emphasis added).

Accordingly, whether the patented product is imported or produced locally, patent protection must be available on equal terms so long as the other requirements set out in the first sentence of Article 27:1 are met. Thus, refusing the grant of patent protection or limiting the scope of protection available to a product solely produced abroad and imported into the patent granting country is a form of discrimination that is sought to be eliminated by Article 27:1. Further, engaging in such a practice may also conflict with a WTO Member's national treatment obligations enshrined in Article 3:1 of TRIPS.<sup>5</sup>

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<sup>5</sup>The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), art 3:1 provides that

[e]ach Member shall accord to the nationals of other Members treatment no less favourable than that it accords to its own nationals with regard to the protection (3) of intellectual property'. Thus, limiting the scope of protection in relation to products that are manufactured elsewhere and imported into the patent granting country (*vis-à-vis* patent owners who manufacture the patented products within the patent granting country) may amount to *de facto* discrimination against foreign patent owners, as it is they who in all probability would be manufacturing the patented product in their own countries, which are then imported into the patent granting country.

See, NP de Carvalho, *The TRIPS Regime and Patent Rights* (3rd edn, Kluwer Law International 2010) 289.

Yet, it must be noted that the principle against discrimination is at odds with a provision in the Paris Convention—i.e. Article 5A(2). The said provision reads as follows:

Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, *failure to work* (emphasis added).

Accordingly, Article 5A(2) of the Paris Convention recognizes that a failure to work a patent in a country in which protection is sought could amount to an abuse of monopoly rights conferred on the patent owner. If a country makes a determination that the failure to work a patent amounts to an abuse of patent rights, such a country has the ‘right’ to issue a compulsory license enabling the local production of the patented product as a form of response to the patent owner’s failure to work the patent. The only restriction under the Paris Convention is that such a:

...compulsory license may not be applied for [...] before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; [and] it shall be refused if the patentee justifies his inaction by legitimate reasons...<sup>6</sup>

It is also important to note that what amounts to a ‘failure to work’ a patent is a matter for domestic interpretation and policy:

The member States are also free to define what they understand by ‘failure to work’. Normally, working a patent will be understood to mean working it industrially, namely, by manufacture of the patented product, or industrial application of a patented process. Thus, importation or sale of the patented article, or of the article manufactured by a patented process, will not normally be regarded as ‘working’ the patent.<sup>7</sup>

Therefore, a plain reading of Article 5A(2) of the Paris Convention suggests that where a patented product is solely imported into a patent granting country without being worked locally, a compulsory license may be issued provided that the requirements stipulated in Article 5A(4) are met. In other words, while a compulsory license can be issued for a patented product which is purely imported, such a license cannot be issued if the product is manufactured in the country concerned. Thus, locally produced patented products are favoured *vis à vis* purely imported patented products. As such, the result seems to contravene the fundamental policy against non-discrimination found in Article 27:1 of TRIPS which provides that equal treatment must be afforded to patents irrespective of whether the underlying product is imported or locally produced. Some countries have avoided grappling with this inconsistency by broadly defining the term ‘working’ to include the importation of the patented product.<sup>8</sup> In fact, it has been suggested that only such an interpretation would be consistent with Article 27:1 of TRIPS:

<sup>6</sup>Paris Convention, art 5A(4).

<sup>7</sup>Bodenhausen (n 1) 71.

<sup>8</sup>M Trimble, ‘Patent Working Requirements: Historical and Comparative Perspectives’ (2016) 6 UC Irvine Law Review 483.

The trade-related context of TRIPS necessitates its own interpretation of the notion of domestic use or local working. While Members are, pursuant to adapted Art. 5A.2 PC, generally free to interpret domestic use, the wider context Arts 27.1 and 31 TRIPS implies that the patent holder exercises his property right when the product is provided on the domestic market, be it through local production or through importation.<sup>9</sup>

Not many have sought to discuss this apparent conflict between Article 27:1 of TRIPS and Article 5A(2) of the Paris Convention. A dispute in the WTO between the United States (US) and Brazil was the only instance when this issue was raised at the WTO level.<sup>10</sup> However, the dispute was settled between the parties robbing the WTO of the opportunity to shed light on the controversial practice of imposing a local working requirement under domestic law. Nevertheless, the US's complaint and Brazil's defence were thought provoking. The primary contention of the US was that Article 68 of the Brazilian Industrial Property Law,<sup>11</sup> which enacted that *inter alia* the 'non-exploitation of the object of the patent within the Brazilian territory for failure to manufacture or incomplete manufacture of the product, or also failure to make full use of the patented process, except cases where this is not economically feasible, when importation shall be permitted,'<sup>12</sup> and giving Brazil a right to impose a compulsory licence for failure to locally work a patent, was contrary to TRIPS. Essentially, the US contended that Brazil's law breached Article 27:1 of TRIPS by suggesting that a local working requirement for the enjoyment of exclusive patent rights that could only be satisfied by the local production, and not the importation, of the patented subject matter, was contrary to the policy of non-discrimination. The US Trade Representative (USTR) submitted that:

Brazil has asserted that the US case will threaten Brazil's widely-praised anti-AIDS program, and will prevent Brazil from addressing its national health crisis. Nothing could be further from the truth. For example, should Brazil choose to compulsory license anti-retroviral AIDS drugs, it could do so under Section 71 of its patent law, which authorizes compulsory licensing to address a national health emergency, consistent with TRIPS, and which the United States is not challenging. In contrast, Section 68 – the provision under dispute – may require the compulsory licensing of any patented product, from bicycles to automobile components to golf clubs. *Section 68 is unrelated to health or access to drugs, but instead is discriminating against all imported products in favour of locally produced products.* In short, Section 68 is a protectionist measure intended to create jobs for Brazilian nationals.<sup>13</sup>

If Brazil's 'access to medicine' justification was made in today's context, however, its weight would be significantly diluted. This is so, owing to the

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<sup>9</sup>Brand, 'Article 2–Intellectual Property Conventions' in P-T Stoll, J Busche and K Arend (eds), *WTO—Trade-Related Aspects of Intellectual Property Rights* (Koninklijke Brill NV 2009) 140.

<sup>10</sup>*Brazil—Measures Affecting Patent Protection* (2001) World Trade Organization DS199.

<sup>11</sup>Law No. 9.279 of 14 May 1996 (Law on Industrial Property (Brazil)).

<sup>12</sup>Law on Industrial Property (Brazil), art 68(1).

<sup>13</sup>Special 301 Report of the US Trade Representative dated 30 April 2001, 10 (emphasis added).

developments that led to the Doha Declaration<sup>14</sup> which expressly recognized the ‘...gravity of the public health problems afflicting many developing and least-developed countries, especially those resulting from HIV/AIDS, tuberculosis, malaria and other epidemics.’<sup>15</sup> As such, the provisions in TRIPS that permit WTO Members to implement compulsory licenses in cases of national emergency,<sup>16</sup> would cast doubt on the justifiability of the use of compulsory licensing for failure to locally work a patent to achieve the same end of access to medicine.

At first blush, at least, the practice of issuing a compulsory license for failure to locally work a patent as permitted by the Paris Convention is a prohibited measure under TRIPS, as it directly conflicts with Article 27:1. How then could Article 5A(2), read with 5A(4), of the Paris Convention be reconciled with TRIPS, if at all?

#### **4 Attempting to Reconcile the Conflict**

The answer to the above question lies in the manner in which the two instruments, i.e. the Paris Convention and TRIPS, are interpreted. To begin with, it is necessary to consider whether there is in fact a conflict at all. In this regard, reference must be made to Article 2:1 of TRIPS, which provides that ‘[i]n respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the Paris Convention.’ Thus, every WTO Member must, in addition to TRIPS, comply with those provisions of the Paris Convention as set out in Article 2:1 of TRIPS. The use of the term ‘comply’ indicates that the reference is to provisions of the Paris Convention that imposes ‘obligations’ on Paris Union states. This is buttressed by Article 2:2 of TRIPS, which provides:

Nothing in Parts I to IV of this Agreement shall *derogate from existing obligations* that Members may have to each other *under the Paris Convention*, the Berne Convention, the Rome Convention and the Treaty on Intellectual Property in Respect of Integrated Circuits (emphasis added).

Hence, the question must be posed whether Article 5A(2), read with 5A(4), of the Paris Convention imposes any obligations on contracting states. If the answer to this is in the affirmative, then nothing in TRIPS (including Article 27:1) could derogate, or detract, from such an existing obligation. In this regard, it has been submitted that provisions of the Paris Convention (and no doubt also TRIPS) falls into two categories—the first being those that are binding on Member States and the

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<sup>14</sup>Declaration on the TRIPS Agreement and Public Health (adopted by the WTO Ministerial Conference in Doha on 14 Nov 2001) WT/MIN(01)/DEC/2 (Doha Declaration).

<sup>15</sup>Doha Declaration, para 1.

<sup>16</sup>TRIPS, art 31.

second being provisions that allow Member States to limit the scope of a certain right.<sup>17</sup> Commenting specifically on Article 5A(2) of the Paris Convention, it has been submitted:

It is indeed noteworthy that paragraph 2 [of TRIPS Article 2] states that nothing in parts I to IV ‘shall derogate from existing obligations’ under the Paris Convention. There is no mention of derogation of rights. This has not been an oversight of negotiators. One might think that, because any obligation corresponds to a right, paragraph 2 implicitly contains a mention of rights, but this is not so. The Paris Convention in some instances does grant rights to countries that the Paris Union Members, rather than to intellectual property owners, without imposing any corresponding obligations. For instance, it was understood that under Article 5A(2), Paris Union Members had the right (and not a mere faculty) to impose on patentees a local working requirement. Under the TRIPS Agreement, such right has been curtailed. The purpose of the last words of Article 27.1 is therefore to derogate from a right that governments of Paris Union Members had under the Paris Convention and that was deemed to diminish the substantive protection of patent owners’ rights and constitute therefore an unjustifiable barrier to international trade.<sup>18</sup>

If such an interpretation is adopted, any domestic legislative measure providing for a local working requirement would not derive from existing obligations between Members of the Paris Union. Accordingly, it must be concluded that the principle against discrimination in Article 27:1 of TRIPS is not subject to, or in any way limited by, Article 5A(2), read with 5A(4), of the Paris Convention—thus giving rise to a conflict between the principle of non-discrimination and requirement for local working of patents. Therefore, any domestic legislative measure adopted by a WTO Member that provides for a local working requirement can only be justified if it is compliant with TRIPS, albeit this would otherwise have been freely permitted under the Paris Convention. In particular, Articles 27:1, 30 and 31 of TRIPS must be considered in this regard.

The TRIPS framework provides for exceptions that permit WTO Members to deviate from the exclusive rights that they are mandated to confer to intellectual property owners—including exclusive patent rights conferred under TRIPS Article 28. A domestic legislative measure adopted by a WTO Member that confers its government or other national authority to issue a compulsory license in cases where a patent has not been worked locally no doubt would amount to a limitation on exclusive patent rights that TRIPS guarantees. As such, a key question that must be considered is whether the imposition of a local working requirement under domestic law could be regarded as a permitted exception under TRIPS Article 30. A WTO Dispute Settlement Panel in *Canada–Pharmaceutical Patents* interpreting Article 30 of TRIPS observed that:

Article 30 establishes three criteria that must be met in order to qualify for an exception: (1) the exception must be ‘limited’; (2) the exception must not ‘unreasonably conflict with normal exploitation of the patent’; (3) the exception must not ‘unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third

<sup>17</sup>Brand (n 9) 147.

<sup>18</sup>Carvalho (n 5) 139.

parties'. The three conditions are cumulative, each being a separate and independent requirement that must be satisfied. Failure to comply with any one of the three conditions results in the Article 30 exception being disallowed.<sup>19</sup>

Thus, any local working requirement that might be introduced into domestic law of a WTO Member must satisfy the cumulative 'three-step' test set out in Article 30 of TRIPS—the first of which requires a determination as to whether the legislative measure amounts to a 'limited' exception. In this regard, it was observed by the WTO Panel in *Canada—Pharmaceutical Patents* that:

Although the word ['limited'] itself can have both broad and narrow definitions, [...] the narrower definition is the more appropriate when the word 'limited' is used as part of the phrase 'limited exception'. The word 'exception' by itself connotes a limited derogation, one that does not undercut the body of rules from which it is made. When a treaty uses the term 'limited exception', the word 'limited' must be given a meaning separate from the limitation implicit in the word 'exception' itself. The term 'limited exception' must therefore be read to connote a narrow exception - one which makes only a small diminution of the rights in question.<sup>20</sup>

The Panel further observed that '[t]o determine whether a particular exception constitutes a limited exception, the extent to which the patent owner's rights have been curtailed must be measured.'<sup>21</sup> Article 28 of TRIPS entitles a patent owner to prevent all third parties from 'making, using, offering for sale, selling or importing' a patented product. Whereas, a local working requirement that compels a patent owner to locally work a patent, and if not face the consequence of the patent becoming the subject of a compulsory license authorizing the local manufacture and sale of the patented product, would essentially entitle the licensee to make, use, offer for sale and sell the patented product—which affects four of the five acts that are exclusive to a patent owner. Arguably, such an encroachment into a patentee's domain of exclusivity cannot be described as a small diminution of the rights in question.<sup>22</sup> Thus, it must be concluded that a domestic legislative measure providing for the issuance of a compulsory license for the failure to locally work a patent cannot be regarded as a 'limited' exception, hence failing to satisfy the first requirement of TRIPS Article 30.<sup>23</sup>

This is, however, not the end of the discussion, as Article 31 of TRIPS dealing with 'Other use without authorization of the right holder'<sup>24</sup> must be considered. Article 31 provides that: 'Where the law of a Member State allows for other use of

<sup>19</sup>*Canada—Patent Protection of Pharmaceutical Products* (2000) World Trade Organization WT/DS114/R, para 7.23.

<sup>20</sup>ibid, paras 7.30, 7.31.

<sup>21</sup>ibid, para 7.32.

<sup>22</sup>Chia-Ling Lee, 'The Legality of Local Patent Working Requirements under the TRIPS Agreement' (2013) 2 NTUT Journal of Intellectual Property Law and Management 39, 47.

<sup>23</sup>P Champ and A Attaran, 'Patent Rights and Local Working under WTO TRIPS Agreement: An Analysis of the U.S.-Brazil Patent Dispute' (2002) 27 Yale Journal of International Law 365, 383; Lee (n 22) 47.

<sup>24</sup>TRIPS, art 31.

the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected.'

Footnote (7) referenced in Article 31 of TRIPS provides that '... 'Other use' refers to use other than that allowed under Article 30.' In other words, exceptions to patent rights imposed under Articles 30 and 31 are mutually exclusive. However, if a WTO Member seeks to justify a compulsory license for failure to locally work a patent under Article 31 of TRIPS, it must be done on an individual basis and after ensuring that all requirements set out from paragraph (a) to (l) of Article 31 are satisfied.

The fact that compulsory licensing under Article 31 can only be granted on 'individual merits'<sup>25</sup> means that there is no room for domestic legislation that calls for the issuance of a compulsory license<sup>26</sup> solely because a patent was not worked locally, without there being other factors that warrant such an outcome. In the event a WTO Member decides to issue compulsory licenses for failure to locally work a patent on a case-by-case basis and after considering the individual merits of each case, such a measure may be successful under Article 31 provided that the other requirements contained therein are satisfied. The requirements that are most relevant to the context of failure to work are discussed below.

First, a compulsory license can only be issued after the proposed user (typically, the government or someone authorized by the government) 'has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time.'<sup>27</sup> Thus, before a compulsory license is issued for failure to locally work a patent, the enabling domestic provision must require the government (or the authorized party) to have attempted to negotiate with the patent owner to secure authorization to work the patent locally on reasonable commercial terms and conditions. On the other hand, a related (yet important) question is whether compulsory licenses for failure to work should be refused if the patent owner justifies his inaction by legitimate grounds in view of the specific requirement to that effect under Article 5A(4) of the Paris Convention. In this regard, it is necessary to consider the relationship between TRIPS Article 31 and Article 5A of the Paris Convention. Article 5A(2) of the Paris Convention specifically deals with

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<sup>25</sup>TRIPS, art 31(a).

<sup>26</sup>A Eikerman, 'Article 31—Other Use Without Authorization of Right Holder' in P-T Stoll, J Busche and K Arend (eds), *WTO—Trade-Related Aspects of Intellectual Property Rights* (Koninklijke Brill NV: 2009) 567.

<sup>27</sup>TRIPS, art 31(b). It must be noted that this requirement 'may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use. In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable. In the case of public non-commercial use, where the government or contractor, without making a patent search, knows or has demonstrable grounds to know that a valid patent is or will be used by or for the government, the right holder shall be informed promptly.'

compulsory licenses for ‘abuse’ of patent rights, including failure to work. Some have contended that Article 31 of TRIPS is dependent on Article 5A(2) of the Paris Convention and that ‘prevention of abuse constitutes a fundamental requirement for the grant of compulsory licenses of any kind.’<sup>28</sup> Yet, the preferred view is that Article 31 of TRIPS ‘places no restrictions on the list of grounds upon which compulsory licenses may be granted. This seems to support the view that these unwritten grounds are to be separate from the category of abuse.’<sup>29</sup> While this may be true in respect of the grounds upon which a compulsory license is based, the question that is posed here is whether the specific requirement under Article 5A(4) of the Paris Convention should curtail the grant of compulsory licenses under Article 31 of TRIPS, where the ground used to justify the compulsory license is a failure to locally work a patent. In this regard, suffice to note that Article 2:2 of TRIPS provides that nothing in TRIPS shall derogate or detract from ‘existing obligations’ between Paris Union states (who also happen to be WTO Members). While it was argued that a ‘right’ to issue compulsory licenses under Article 5A(2) of the Paris Convention does not constitute an existing obligation, the requirement that such a license must be refused in the event a patent owner’s inaction is justified amounts to an obligation between Paris Union states. Accordingly, it may be persuasively argued, that the requirement set out in Article 5A(4) of the Paris Convention must be read into the context of TRIPS Article 31, where failure to work provides the basis of a compulsory license. A similar argument would apply to the other requirement stipulated in Article 5A(4) of the Paris Convention that prohibits the imposition of compulsory licenses for failure to work a patent before the expiration of four years from the filing date or three years from the date of grant, whichever expires last.

Secondly, ‘the scope and duration of [the compulsory license] shall be limited to the purpose for which it was authorized’<sup>30</sup> and must be ‘terminated if and when the circumstances which led to [the issuing of the compulsory license] cease to exist and are unlikely to recur.’<sup>31</sup> When a patent is not locally worked, and the patentee has no valid reason or excuse for not doing so, the purpose of a compulsory license is arguably to enable the patent granting country to acquire the benefits of local working. As such, after a compulsory license on this basis is granted, where a patentee provides an assurance to work the patent locally (either by himself or through suitable licensing arrangements), the compulsory license should cease, unless there are grounds to believe that the circumstances upon which the compulsory license was granted (i.e. failure to locally work the patent) is likely to recur,

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<sup>28</sup>J Straus, ‘Implications of the TRIPS Agreement in the Field of Patent Law’ in F-K Beier and G Schricker (eds), *From GATT to TRIPs: the agreement on trade-related aspects of intellectual property rights* (Weinheim 1996) 204.

<sup>29</sup>Eikerman (n 26) 564.

<sup>30</sup>TRIPS, art 31(c).

<sup>31</sup>ibid, art 31(g).

as well as subject to the interests of the party in whose favour the compulsory license was granted.

Thirdly, compulsory licenses under TRIPS Article 31 have to be non-exclusive and non-assignable.<sup>32</sup> This represents the same basis upon which compulsory licenses are permitted under Article 5A(2) of the Paris Convention, and should raise no concern in practice.<sup>33</sup>

Notably, however, compulsory licenses under TRIPS Article 31 are subject to a significant limitation. That is, the compulsory license ‘shall be authorized predominantly for the supply of the domestic market of the Member.’<sup>34</sup> Although this provision does not fully prohibit the exportation of products manufactured under a compulsory license, as it does allow the export of the ‘non-predominant’ part of the production,<sup>35</sup> the fact that the products must be supplied ‘predominantly’ to the local market may become a disincentive to licensees. The term ‘predominantly’ attracts a number of possible interpretations. Some suggest that where the domestic market of the Member granting the compulsory licence takes the greatest share of supply among all Members receiving products produced under the licence, then the product manufactured under a compulsory license is supplied ‘predominantly’ to the domestic market.<sup>36</sup> Others argue that a quantitative approach should be adopted in determining whether a product is supplied predominantly to the domestic market<sup>37</sup>—e.g. ‘49.9% of the production under a compulsory licence could be exported.’<sup>38</sup> Another possible interpretation is that ‘the intentions of Members should be decisive in determining what constitutes a ‘predominant’ use of the compulsory licence’<sup>39</sup> according to which WTO Members would not violate their obligation under Article 31(f) if the granting of a compulsory licence is primarily aimed at supplying the domestic market.<sup>40</sup> It has been suggested that unless the last of these interpretations is adopted, WTO Members ‘with a small market would possibly be obliged either to allow for only uneconomical production or not to issue

<sup>32</sup>ibid, arts 31(d), (e).

<sup>33</sup>Paris Convention, art 5A(4).

<sup>34</sup>TRIPS, art 31(f). However, it must be noted that this restriction does not apply to the export of ‘pharmaceutical products’ under a compulsory license to an ‘eligible importing Member’ (TRIPS, art 31bis).

<sup>35</sup>Eikerman (n 26) 573.

<sup>36</sup>FM Abbott, ‘Compulsory Licensing for Public Health Needs: The TRIPS Agenda at the WTO after the Doha Declaration on Public Health’ (2002) Quaker United Nations Office, Occasional Paper No 9 26 <<https://ssrn.com/abstract=1977304>>.

<sup>37</sup>Carlos Correa, *Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement* (Oxford University Press 2007) 321.

<sup>38</sup>Jerome Reichmann and Catherine Hasenzahl, ‘Non-voluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the United States of America’ (2005) ICTSD Issue Paper No 5, 16 <[https://www.ictsd.org/downloads/2008/06/cs\\_reichman.hasenzahl.pdf](https://www.ictsd.org/downloads/2008/06/cs_reichman.hasenzahl.pdf)> accessed 1 January 2018.

<sup>39</sup>Carvalho (n 5) 241.

<sup>40</sup>Eikerman (n 26) 574.

compulsory licences at all,<sup>41</sup>—which arguably defeats the very objectives of Article 31 of TRIPS. Accordingly, any domestic legislative measure providing for a compulsory license for failure to locally work a patent must provide that the licensee must primarily aim to supply the domestic market, which would not preclude the possibility of export.

Based on the foregoing discussion, any domestic legislation that provides for a local working requirement, through the vessel of a compulsory license for failure to work, would arguably be compliant with the TRIPS framework provided that it subscribes to the conditions expressly set out in Article 31, and those set out in Article 5A(4) of the Paris Convention made applicable by TRIPS Article 2:2.

There is, however, one other issue that must be considered, which potentially stands as a significant obstacle to local working requirements—i.e. TRIPS Article 27:1 which imposes an obligation against discrimination. Thus, it is necessary to consider the relationship between Articles 27:1 and 31 of TRIPS. In *Canada-Pharmaceutical Patents* the WTO Panel had to consider precisely that, but in the context of Article 30 of TRIPS. Accordingly, the Panel concluded that ‘the anti-discrimination rule of Article 27.1 does apply to *exceptions of the kind authorized by Article 30*.’<sup>42</sup>

The dispute before the WTO Panel was whether discrimination as to the field of technology arose in the implementation of Section 55.2(1) of Canada’s Patent Act. The said provision, which created a regulatory review exception, provided as follows:

It is not an infringement of a patent for any person to make, construct, use or sell the patented invention *solely for uses reasonably related to the development and submission of information required under any law of Canada, a province or a country other than Canada that regulates the manufacture, construction, use or sale of any product* (emphasis added).

Thus, where a law requires approval to be granted by any authority before a product could be placed on the market, notwithstanding the existence of a patent, any third party which is planning to enter the market after the patent expires could use the patented product for the limited purposes of supplying information to the relevant authority in order to obtain approval. The rationale for this mechanism is to eliminate any delays that may be faced by third parties as a result of having to obtain regulatory approval prior to entering the market, especially in the pharmaceutical industry. While arguing that Section 55.2(1) was consistent with Article 30 of TRIPS, Canada sought to draw a distinction between TRIPS Articles 30 and 31 to suggest that the norms against discrimination enshrined in Article 27:1 do not apply to Article 30. In the process, however, Canada admitted that the non-discrimination principles did apply to Article 31 of TRIPS. The Panel accordingly concluded:

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<sup>41</sup>ibid.

<sup>42</sup>*Canada-Pharmaceutical Patents* (n 19), para 7.93 (emphasis added).

The acknowledged fact that the Article 31 exception for compulsory licences and government use is understood to be subject to the non-discrimination rule of Article 27.1, without the need for any textual provision so providing, further strengthens the case for treating the non-discrimination rules as applicable to Article 30.<sup>43</sup>

Such a conclusion renders the imposition of a compulsory license for failure to locally work a patent more difficult to justify—as even if a domestic measure permitting such compulsory licenses complies with all the requirements of Article 31, it still has to withstand the policy against discrimination set out in Article 27:1.<sup>44</sup>

In view of the conclusion on the interaction between TRIPS Articles 31 and 27:1, it is necessary to determine whether there could ever be a TRIPS compliant local working requirement. In this regard there are two matters that merit attention. The first concerns the meaning of ‘discrimination’ in Article 27:1 of TRIPS. The second concerns the context in which the obligation not to discriminate arises.

The term ‘discrimination’ is perhaps one of the most difficult terms to define. The WTO Panel in the *Canada–Pharmaceutical Patents* dispute considered to great detail the meaning of discrimination in relation to Article 27:1 of TRIPS. The Panel observed in this context that:

The primary TRIPS provisions that deal with discrimination, such as the national treatment and most-favoured-nation provisions of Articles 3 and 4, do not use the term ‘discrimination’. They speak in more precise terms. The ordinary meaning of the word ‘discriminate’ is potentially broader than these more specific definitions. It certainly extends beyond the concept of differential treatment. *It is a normative term, pejorative in connotation, referring to results of the unjustified imposition of differentially disadvantageous treatment.* Discrimination may arise from explicitly different treatment, sometimes called ‘de jure discrimination’, but it may also arise from ostensibly identical treatment which, due to differences in circumstances, produces differentially disadvantageous effects, sometimes called ‘de facto discrimination’....Discrimination’ is a term to be avoided whenever more precise standards are available, and, when employed, it is a term to be interpreted with caution, and with care to add no more precision than the concept contains.<sup>45</sup>

The Panel concluded that Section 55.2(1) did not amount to *de jure* discrimination in that a plain reading of the said provision did not discriminate one field of technology over another. The European Commission (which was the complainant) argued that the Canadian provision resulted in *de facto* discrimination as well, since it was predominantly in the pharmaceutical industry that regulatory approval was required before a product can be placed in the market. As regards this, the Panel observed that:

<sup>43</sup>ibid, para 7.91.

<sup>44</sup>KJ Nowak, ‘Staying Within the Negotiated Framework: Abiding by the Non-Discrimination Clause in TRIPS Article 27’ (2005) 26 Michigan Journal of International Law 899. Scholars are divided on this point. Some scholars have argued that the WTO Panel was wrong in holding that the non-discrimination rule in art 27:1 applies to exceptions.

<sup>45</sup>*Canada–Pharmaceutical Patents* (n 19), para 7.94 (emphasis added).

.. *de facto* discrimination is a general term describing the legal conclusion that an ostensibly neutral measure transgresses a non-discrimination norm because its actual effect is to impose differentially disadvantageous consequences on certain parties, and because those differential effects are found to be wrong or unjustifiable.<sup>46</sup>

Thus, in simple terms discrimination arises from subjecting persons who are similarly situated or circumstanced, to differential treatment. In the case of Article 27:1 of TRIPS, whatever the field of technology, wherever the product is manufactured (i.e. whether locally produced or imported), or wherever the product was first invented, all patentable inventions are deemed to form one single class to which equal treatment must be afforded. Of course, in the event certain persons within that single class are discriminated, so long as the differential effects are not found to be wrong or unjustified, it may nonetheless be consistent with TRIPS. It is in this background that one must assess the possibility of imposing compulsory licenses in relation to products solely produced abroad and imported into a patent granting country. Thus, the question that must be posed is whether the issuance of a compulsory license that discriminates against a patent owner who solely imports the patented product into the country concerned *vis-à-vis* patent owners who produce the patented products locally, is a form of discrimination that is wrong or unjustified so as to violate TRIPS Article 27:1.

It has been submitted that the context in which the term ‘discrimination’ in Article 27:1 of TRIPS is used does not create an absolute bar against the forms of discrimination specified therein.<sup>47</sup> It was observed in *Canada–Pharmaceutical products* that:

[T]he context to which the Panel may have recourse for purposes of interpretation of specific TRIPS provisions, in this case Articles 27 and 28, is not restricted to the text, Preamble and Annexes of the TRIPS Agreement itself, but also includes the *provisions of the international instruments on intellectual property incorporated into the TRIPS Agreement*, as well as any agreement between the parties relating to these agreements within the meaning of Article 31(2) of the Vienna Convention on the Law of Treaties.<sup>48</sup>

Accordingly, even though Article 5A(2), read with 5A(4), of the Paris Convention are not provisions that cannot be overridden by TRIPS (in view of the arguments made before concerning the effect of Article 2:1 and 2:2 of TRIPS), these provisions in the Paris Convention, being an international instrument on intellectual property ‘incorporated into TRIPS’, could still provide useful context for the interpretation of TRIPS Article 27:1. In light of this, it is necessary to consider the purpose for which Article 5A(2), read with 5A(4), was introduced to the Paris Convention, and whether a blanket prohibition on the imposition of compulsory licenses for failure to locally work a patent disregards that purpose.

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<sup>46</sup>*ibid*, para 7.101 (emphasis added).

<sup>47</sup>Bryan Mercurio, and Mitali Tyagi, ‘Treaty Interpretation in WTO Dispute Settlement: The Outstanding Question of the Legality of Local Working Requirements’ (2010) 19 Minnesota Journal of International Law 275.

<sup>48</sup>*Canada–Pharmaceutical* (n 19), para 7.14 (emphasis added).

From a historical point of view, it must be noted that it was common practice for states to forfeit patents that were not worked in the territory in which patent rights were granted. One of the earliest known patent legislation, the Venetian Patent Act 1474, required the active exploitation of patents, the failure of which resulted in the patent being cancelled.<sup>49</sup> In other words, if a patent owner resorted to the practice of solely importing the patented product, the country of importation was permitted to forfeit the patent resulting in the complete extinguishment of the rights of a patent owner in that territory. Forfeiture was regarded as too harsh a punishment, and it was in this regard that Article 5A(1) of the Paris Convention was put into place. Article 5A(1) of the Paris Convention provides that '[i]mportation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent', thus, prohibiting forfeiture as a consequence of failing to locally produce a patented product. Therefore, the purpose of Article 5A(2) of the Paris Convention is to maintain the interests of the country granting patent protection, while also taking into account the interests of the patent owner. It was an important balancing act to mitigate the harshness of forfeiture and to address the abuse of patent rights that failure to locally work a patent could give rise to. As such, in interpreting TRIPS Article 27:1, the objectives of Article 5A(2), read with 5A(4), of the Paris Convention provides an important context, which cannot be disregarded.

Furthermore, the context for the purpose of interpreting a treaty shall also include its preamble.<sup>50</sup> In this case, the relevant instrument being the TRIPS Agreement, one may consider the preamble to TRIPS in an attempt to make sense of the intention of the contracting parties, when they negotiated Article 27:1. Since the preamble to TRIPS recognizes *inter alia* '...the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives...' one could argue that a blanket prohibition on the imposition of a local working requirement for the maintenance of exclusive patent rights would defeat the aims expressly recognized in the preamble to TRIPS. As stated earlier, imposing a local working requirement is a useful mode of achieving some of the 'developmental' and 'technological' objectives envisaged by TRIPS. Moreover, Article 31(3) of the Vienna Convention on the Law of Treaties provides that '[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.'

The objectives of TRIPS have been clearly laid down in Articles 7 therein, which provides that:

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<sup>49</sup>Christine MacLeod, *Inventing the Industrial Revolution: The English Patent System, 1660–1800* (Cambridge University Press 1988) 11.

<sup>50</sup>Vienna Convention on the Law of Treaties (adopted on 23 May 1969, entered into force on 27 January 1980), art 31 (2).

The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations (emphasis added).

Thus, given that locally working a patent would no doubt carry out the objectives stated in Article 7 of TRIPS, the rules of interpretation require that the provisions of TRIPS including Article 27:1 be interpreted in a manner that gives effect to these objectives. This approach too demonstrates that TRIPS as a whole does not condemn the imposition of a local working requirement.

Also noteworthy are the principles laid down in Article 8 of TRIPS which reads as follows:

1. Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.
2. Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology.

This stresses the need for ‘socio-economic’ and ‘technological’ development and the need to prevent practices which ‘adversely affect the international transfer of technology.’ Accordingly, it may be persuasively argued that on an overall reading of TRIPS, the imposition of a local working requirement in a Member’s domestic law does not fall afoul of TRIPS Article 27:1 if such a measure can be justified on valid grounds. In particular, where the domestic legislative measure is grounded on TRIPS Article 31 and compulsory licenses for failure to work are granted on a case-by-case basis, the chances of it being compliant with TRIPS is much greater.

## **5 The Approaches in India and Sri Lanka**

The discussion hitherto established that a local working requirement that utilizes the compulsory licensing mechanism envisaged under TRIPS Article 31, read with Article 5A(2) and (4) of the Paris Convention, might be compatible with the TRIPS framework provided that any discrimination that this might give rise to is justifiable and not wrong. In this part of the chapter, the approach adopted in India in respect of failure to locally work patents is considered in order to inspire legal reform in a jurisdiction further south, i.e. Sri Lanka.

## 5.1 The Law in India

Section 83 of the Indian Patents Act 1970 (PA 1970),<sup>51</sup> provides as follows:

Without prejudice to the other provisions contained in this Act, in exercising the powers conferred by this Chapter, regard shall be had to the following general considerations, namely,—

- (a) that patents are granted to encourage inventions *and to secure that the inventions are worked in India on a commercial scale and to the fullest extent* that is reasonably practicable without undue delay;
- (b) that they are not granted *merely to enable patentees to enjoy a monopoly for the importation of the patented article* (emphasis added).

Thus, sub-section (b) of Section 83 makes it patently clear that patents are not granted in India to merely allow patentees to exclusively import the patented product into the country, whereas Sub-section (a) sets out that patents must be worked in India to the extent reasonably practicable. This, arguably, establishes a local working requirement in India. Section 146(1) of the PA 1970 facilitates this by providing as follows:

The Controller may, at any time during the continuance of the patent, by notice in writing, require a patentee or a licensee, exclusive or otherwise, to furnish to him within two months from the date of such notice or within such further time as the Controller may allow, such information or such periodical statements as to the extent to which the patented invention has been commercially worked in India as may be specified in the notice.

Section 146(2) of the PA 1970, read with Rule 131 of the Patents Rules 2003, requires patentees and licensees to provide an annual statement of commercial working. The statement must comply with Form 27 (as indicated in the Second Schedule to the Patent Rules 2003), and must include the following:

1. Whether the patent has been worked.
2. Justifications if the patent has not been worked.
3. If it had been worked, the quantum and value (in Indian Rupees) of the patented product locally manufactured and imported from other countries including details of those countries.
4. Details of licenses and sub-licenses granted during the year.
5. Whether the requirement to promote the public interest has been met partially, adequately or to the fullest extent possible at a reasonable price.

Thus, while there is a possibility for a patent to be regarded as sufficiently worked locally even though the patented product is solely imported, this seems to be the exception rather than the norm. Unless the patentee is able to provide

<sup>51</sup>T Kongolo, ‘Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS): New Strategies for Developing Countries’ (2000) International Business Law Journal 345. Apart from India, countries such as Congo, Kenya, Tanzania and Nigeria have provisions relating to local working of patents in their domestic laws.

justifications as to why the patented product cannot be manufactured locally, or where the requirement to promote the public interest is met by the importation of the patented product, it appears that a patent must be locally worked—i.e. by the local manufacture of the patented product or application of the patented process. This view is consistent with the decision of the High Court of Bombay in *Bayer Corporation v Union of India*,<sup>52</sup> where the court held that although the local manufacture of the patented product is not a prerequisite for a patent to be considered as being worked in India, the patentee must establish why it is not possible to manufacture the patented product locally.

While the failure to submit statements of commercial working as required under the law could lead to substantial fines (up to ₹ one million),<sup>53</sup> what is notable is that the failure to locally work a patent could also become a ground upon which a compulsory license may be granted. This is possible in view of Section 84(1) of the PA 1970, read with Section 90. Section 84(1) permits the grant of compulsory licenses in the following terms:

At any time after the expiration of three years from the date of the grant of a patent, any person interested may make an application to the Controller for grant of compulsory licence on patent on any of the following grounds, namely:

- (a) that the *reasonable requirements of the public with respect to the patented invention have not been satisfied*, or
- (b) that the patented invention is not available to the public at a reasonably affordable price, or
- (c) that the *patented invention is not worked in the territory of India* (emphasis added).

Thus, while Section 84(1) itself expressly specifies that a compulsory license may be issued on the ground that a patent is not worked in India, Section 84(7) sets out instances when ‘the reasonable requirements of the public’ is deemed not to have been met. This includes the failure of the patentee ‘to work the patent in the territory of India on a commercial scale to an adequate extent or to work the patent to the fullest extent that is reasonably practicable.’<sup>54</sup> More importantly, the reasonable requirements of the public will be deemed not to have been satisfied where the ‘working of the patented invention in the territory of India on a commercial scale is being prevented or hindered by the importation from abroad of the patented article.’ Notably, the general purposes for granting compulsory licenses include the objective of ensuring that ‘patented inventions are worked on a commercial scale in the territory of India without undue delay and to the fullest extent that is reasonably practicable.’<sup>55</sup>

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<sup>52</sup> *Bayer Corporation v Union of India* (2013) Bombay High Court, WP No 1323 of 2013.

<sup>53</sup> Patent Act 1970, s 122.

<sup>54</sup> *ibid*, s 84(7) (d).

<sup>55</sup> *ibid*, s 89(a).

On a reading of the aforesaid provisions that exist in the PA 1970, it is clear that the Indian approach requires the local working of patents, leading to the grant of compulsory licenses in cases where the requirement is not met. Arguably, the grant of compulsory licenses for failure to work complies with TRIPS Article 31, read with Article 5A(2) and (4) of the Paris Convention. If at all, there could be some controversy in respect of the requirement set out in TRIPS Article 31(f)—which requires licenses to be granted ‘predominantly for the supply of the domestic market.’ This is because although the grant of compulsory licenses in India are for the predominant ‘purpose’ of supplying to the Indian market, licensees ‘may also export the patented product, if need be.’<sup>56</sup> However, it may be argued that this approach is still compliant with TRIPS Article 31(f) in view of the broader, and more flexible, interpretation that may be afforded to that provision.<sup>57</sup> The Indian approach would arguably also satisfy the norms on non-discrimination enshrined in TRIPS Article 27:1, which are made relevant to the context of Article 31, since the approach to local working under the PA 1970 is not a generalized one, and instead adopts a case-by-case assessment in the public interest.<sup>58</sup>

## 5.2 *The Law in Sri Lanka*

Unlike India, the approach adopted in Sri Lanka in relation to local working of patents is strikingly less specific, if not far less progressive. The law that regulates patents in Sri Lanka is contained in Part IV of the Intellectual Property Act 2003 (IP Act 2003). In particular Section 84(1) under the heading ‘Rights of owner of Patent’ provides that a patentee shall have inter alia the exclusive right to exploit the patented invention, while also empowering the patentee to exclude the unauthorized exploitation of the patent by third parties.<sup>59</sup> It is noteworthy that ‘exploitation’ of a patent is defined as ‘... the making, *importing*, offering for sale, selling, exporting or using the [patented] product.’<sup>60</sup> Whereas, the IP Act 2003 does not contain a single provision that expressly deals with failure to locally work patents. This is a significant disadvantage to Sri Lanka, as it could discourage the

<sup>56</sup>ibid, s 90(1) (vii).

<sup>57</sup>Eikerman (n 26).

<sup>58</sup>Reddy and Kadri (n 4); Jorge Contreras, Rohini Laksharé and Paxton Lewis, ‘Patent Working Requirements and Complex Products’ (2017) 7 New York University Journal of Intellectual Property & Entertainment Law 1.

In *Bayer Corporation v Union of India*, the High Court of Bombay considered the ‘failure to work’ provisions of the Patent Act 1970 in light of TRIPS, art 27, 30 and 31. It seems that the High Court was of the view, albeit tacitly, that the provisions in the Patent Act 1970 permitting compulsory licenses for failure to locally work a patent is not inconsistent with TRIPS. For a more comprehensive discussion of the Indian approach.

<sup>59</sup>Intellectual Property Act 2003, s 84(2)..

<sup>60</sup>ibid, s 84(3) (emphasis added).

transfer of technology (being an important objective that developing countries strive to achieve through the patent system) in fields of technology that remain underdeveloped in Sri Lanka, while also being detrimental towards generating employment opportunities through the setting up of local industrial plants and factories.

However, Section 86(2) of the IP Act 2003, which replicates TRIPS Article 31, provides for the grant of compulsory licenses, and there is a possibility that compulsory licenses can be issued in cases of failure to work, albeit this has never happened so far. Unlike in India, where compulsory licenses may be granted on *inter alia* the ground that a patent has not been locally worked, the corresponding Sri Lankan provision does not specify any grounds upon which such licenses may be issued. In exercising his discretion, the Director General of Intellectual Property, must only be satisfied that ‘the applicant has made efforts to obtain approval from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time.’<sup>61</sup> Unlike in the case of the Indian provision, where a compulsory license may be granted only after the expiration of three years from the date of grant of a patent, the corresponding Sri Lankan provision does not contain such a restriction. While TRIPS Article 31 does not itself impose such a requirement, in cases of failure to work, it must be recalled that Article 5A(4) of the Paris Convention imposes this requirement. As such, in the case of Sri Lanka, the competent authority in issuing compulsory licenses on the ground of failure to work must comply with Article 5A(4) of the Paris Convention, in addition to the requirements set out in TRIPS Article 31. Most significantly, Section 86(2)(d) provides that the exploitation of a patent under a compulsory license ‘shall be predominantly for the purpose of supply to the domestic market,’ which is included to comply with TRIPS Article 31(f). The wording of this provision is much narrower in comparison to the corresponding Indian provision (which requires licenses to be granted for the ‘predominant purpose of supply in the Indian market). While the Sri Lankan provision has literally reproduced TRIPS Article 31(f), the Indian provision has adopted a style that corresponds to a broader interpretation of the same TRIPS provision. Thus, unless the Sri Lankan competent authority adopts a broader and more flexible approach in interpreting Section 86(2)(d) when imposing conditions on a licensee under a compulsory license, the requirement to supply predominantly to the domestic market may stand as a disincentive to licensees in Sri Lanka. This is particularly because the Sri Lanka market is small (in comparison to India) and unless licensees are able to engage in exportation, their operations may become uneconomical.

Thus, it would not be all that inaccurate to suggest that the Sri Lankan position in relation to local working is far less progressive than that of its neighbour’s. In fact, when the Intellectual Property Bill 2003 (IP Bill) was originally introduced in Parliament, the draft did not even contain a clause that was equivalent to Section 86

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<sup>61</sup>ibid, s 86(2)(b); This requirement may be waived in cases of national emergency of public non-commercial use (s 86(2)(c)). This complies with TRIPS, art 31(b).

in the IP Act 2003 that provides for limited exceptions and compulsory licenses. Yet, in view of the IP Bill's constitutionality being challenged, the Supreme Court made a determination that without provisions capable of providing for exceptions to the exclusive rights conferred on patent owners for a period of 20 years under clauses 83 and 84 of the IP Bill (the equivalent of Sections 83 and 84 of the IP Act 2003), both those clauses would be contrary to Article 12 of the Sri Lankan Constitution, which guarantees all persons the equal protection of the law. The Supreme Court in the course of its determination observed as follows:

None of these measures<sup>62</sup> have been incorporated in the Bill on Intellectual Property. The provisions of the TRIPS Agreement clearly specify that it has incorporated mitigatory provisions, as the Agreement would be applicable for developed countries as well as to the less developed nations. In fact, World Trade Organization (WTO) has recognized the inequality of nations in respect of the TRIPS Agreement by prescribing a staggered time frame for the implementation of the Agreement among countries of different economic levels. Therefore it is an accepted fact that the provisions of the TRIPS Agreement would be applicable to countries developed as well as developing, which cannot be treated as equals. Article 12(1) of the Sri Lanka Constitution not only guarantees equality before the law, but also provides for the equal protection of the law. It is well settled law that just as much as equals should not be placed unequally, at the same time unequals should not be treated as equals.<sup>63</sup>

Section 86 of the IP Act 2003 was a result of the Supreme Court's intervention and clearly intended to bring greater equality between Sri Lanka, as a nation that was (and still is) burdened with economic difficulties, and other more developed nations that were the proponents of the intellectual property system. Despite the intervention, however, it is unfortunate that, in formulating Section 86 of the IP Act 2003, the drafters have not been forward thinking in their approach, and instead thought it fit to simply reproduce TRIPS Article 30 and 31 verbatim. Thus, to overcome the potential disadvantages of the lack of a coherent legislative framework to facilitate the local working of patents, Sri Lanka would benefit by modifying its current approach to compulsory licensing. In particular, the following key points must be noted in making these modifications:

1. A list of grounds upon which compulsory licenses may be granted must be specified in the legislation. Such a list must be sufficiently open and wide, and must be non-exhaustive, while specifically stating that failure to locally work a patent is one of the grounds upon which a compulsory license can be granted.
2. In cases where a compulsory license is being granted on the ground of failure to work, in addition to the requirements set out in Article 31 of TRIPS, the legislative provision must also enshrine the requirements set out in Article 5A(4) of the Paris Convention.
3. In order to incentivize potential licensees that obtain licenses under compulsory licensing schemes, the legislation must adopt a flexible approach to

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<sup>62</sup>Here, the Supreme Court was referring to the exceptions to patent rights made available under TRIPS, arts 30, 31.

<sup>63</sup>SC Special Determination No 14/2003 (SN Silva CJ).

- implementing the requirement in TRIPS Article 31(f)—i.e. the requirement that licenses must be issued ‘predominantly for the supply of the domestic market’.
4. The determination of the Director General of Intellectual Property to grant a compulsory license for failure to work must be based on rational and valid grounds and must be made on a clear case-by-case basis in order to prevent a violation of TRIPS Article 27:1.

## 6 Conclusion

Patents are aimed at encouraging innovation. However, abuse of patent rights can lead to tremendous hardships especially in developing countries. The patent system must attempt to draw a balance between the rights of the inventor, and others who seek to benefit from the invention. In this regard, the interests of the patent granting country must be taken into consideration. This would include the opportunities available for the transfer of technology, infrastructure development and the generation of employment opportunities in the fields in which patents are granted. These aims could not be achieved unless patents are locally worked—i.e. the patented product is manufactured or the patented processes are applied locally. The mere importation of a finished patented product, without any further processing in the patent granting country, would be of no benefit and the only outcome would be the sale of patented products at prices determined by patentees. Therefore, the imposition of a local working requirement is a measure by which a balance could be reached between the patent owner’s interests on the one hand, and the interests of the patent granting country, its government and citizens. What has been suggested in this chapter is that utilising compulsory licensing schemes permitted under TRIPS Article 31 to implement a local working requirement could achieve that fine balance, without unreasonably interfering with the rights and interests of patent owners, while also ensuring compliance with the non-discrimination policy of TRIPS Article 27:1. This chapter considered the approach to local working adopted in India and compared it with Sri Lanka’s approach, which unfortunately is much less developed and forward thinking. The chapter concluded by suggesting ways by which Sri Lanka’s legislative framework could be improved to facilitate and apply a local working requirement through the vessel of compulsory licenses permitted under TRIPS Article 31. It is only with a coherent policy and legislative framework on local working of patents that developing countries such as Sri Lanka could strive to achieve socio-economic prosperity and technological advancements within the WTO’s TRIPS framework.

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