

Standard essential patents – a comparison of approaches between East and West

Yo Sop Choi

Associate Professor, Hankuk University of Foreign Studies, Seoul

Andreas Heinemann*

Professor, University of Zurich, Switzerland

The rapid development of the ‘New Economy’ on a global scale has brought new issues of competition law, one of them concerning the licensing of standard essential patents (SEPs). Standardization allows interoperability and compatibility and thus enhances not only static but also dynamic efficiency. However, the procedures in standard setting organizations (SSOs) may not be used to unduly restrict competition. In Asia, for example, most competition regimes have highlighted their focus on fair and free competition, making clear that the field of SEP is no exception. Recently, the competition authorities in Korea and China have concluded that a breach of ‘fair, reasonable and non-discriminatory (FRAND)’ commitments may constitute violations of their competition rules, apparently taking inspiration from the case law in the EU. Therefore, it seems overdue to look at recent developments in competition law and policies on SEP and FRAND worldwide and to enquire into the divergence and convergence of competition law in selected jurisdictions. Despite considerable differences, a common feature of all competition regimes discussed in this article is that their goal is to keep markets in the information and communication technology sector as open as possible, including – and especially – with respect to standard-setting procedures.

Keywords: SEP, SSO, FRAND, competition law, new economy, IP, comparative law

1 INTRODUCTION

The information and communication technology (ICT) sector depends on interoperability and compatibility. Hardware and software require standardized technologies in order to interact smoothly.¹ The need for untroubled interaction does not stop at borders; it has a transnational character. There are various ways to develop technologies of worldwide significance, one being the elaboration of standards by standard setting organizations (SSOs), where industry representatives improve technologies cooperatively. Their goal is to create a principle on which implementers of the standards can rely. The benefit of standards is that consumers’ utility is increased in that their devices can then be used in numerous contexts and are allowed to realize their full

* A Heinemann is Professor of Commercial, Economic and European Law and President of the Swiss Competition Commission. The views and opinions expressed in this article are those of the author and do not necessarily reflect those of the institutions to which he is affiliated.

1. For further in-depth analysis, see Rolf H Weber, ‘Competition Law Versus FRAND Terms in IT Markets’ (2011) 34 World Competition 51.

potential. The resulting attractiveness strengthens the incentives to innovate and thus increases dynamic efficiency.²

This brief sketch illustrates the positive effects of standardization for economic and technological development.³ On the downside, there are risks to the competitive process due to standardization. On the one hand, industry-wide cooperation entails the possibility of collusion beyond the necessities of technological harmonization. On the other hand, standards are widely based on patents. The owners of standard essential patents (SEPs) often obtain significant market power, as their patents are 'standard' and 'essential' to a certain technology, creating a 'technological bottleneck',⁴ which means that it is impossible to manufacture standards-compliant products without using the respective patent. Thus, the relevant industries are locked into the patent if it is not possible to develop alternative technologies. In particular, holders of SEPs, which have been selected by SSOs, can prevent others from manufacturing any products complying with the standardized technology and require them to pay higher royalties than expected, which is the so-called patent hold-up.⁵ Therefore, SSOs today normally require the SEP holders to declare their willingness to license on 'fair, reasonable and non-discriminatory (FRAND)'⁶

2. Philippe Chappatte and Paul Walter, 'European Competition Law, Non-Practising Entities, and FRAND Commitments', in Steven Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP, Oxford 2011) 374.

3. For more background, see the fundamental studies of Clemens Appl, *Technische Standardisierung und Geistiges Eigentum* (Springer, Vienna and New York 2012); Torsten Körber, *Standard Essential Patents, FRAND Commitments and Competition Law* (Nomos, Baden-Baden 2013); Björn Lundqvist, *Standardization under EU Competition Rules and US Antitrust Laws* (Edward Elgar Publishing, Cheltenham 2014); Peter Picht, *Strategisches Verhalten bei der Nutzung von Patenten in Standardisierungsverfahren aus der Sicht des europäischen Kartellrechts* (Stämpfli, Bern 2013); Valerio Torti, *Intellectual Property Rights and Competition in Standard Setting* (Routledge, Abingdon 2016).

4. Richard N Langlois, 'Technological Standards, Innovation, and Essential Patents: Toward a Schumpeterian Post-Chicago Approach', in Jerry Ellig (ed), *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues* (CUP, Cambridge 2001) 194.

5. See, eg, Chappatte and Walter (n 2) 374; Bruce H Kobayashi and Joshua D Wright, 'Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup', in Geoffrey A Manne and Joshua D Wright (eds), *Competition Policy and Patent Law under Uncertainty: Regulating Innovation* (CUP, Cambridge 2011) 479; US Department of Justice (DOJ) and US Federal Trade Commission (FTC), 'Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition' (2007) 34 <www.ftc.gov/reports/antitrust-enforcement-intellectual-property-rights-promoting-innovation-competition-report> accessed 29 August 2017. For a critical view of the risk of hold-up, see Douglas H Ginsburg, Koren W Wong-Ervin and Joshua D Wright, 'The Troubling Use of Antitrust to Regulate FRAND Licensing', *CPI Antitrust Chronicle*, October 2015(1); for the role of antitrust to avoid patent ambush, see Daryl Lim, 'Patent Holdups' in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 245.

6. In the US, the term 'RAND' is preferred, which gives preference to the reasonableness over the fairness of licensing conditions. However, 'FRAND' is also used frequently, see, eg, the US FTC, Press Release, 'FTC Charges Qualcomm with Monopolizing Key Semiconductor Device Used in Cell Phones: Company's Sales and Licensing Practices Hamper Qualcomm's Competitors and Threaten Innovation in Mobile Communications, According to FTC' (17 January 2017) <www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used> accessed 12 August 2017.

terms.⁷ However, FRAND commitments are not formally mandatory. Since SSOs have the right to exclude SEPs which are not covered by a FRAND commitment, such commitments will be the rule.⁸

Nonetheless, FRAND is a rather vague concept, and it is often interpreted differently by competition regimes around the world.⁹ This vagueness has created case law which is not always homogeneous, especially when a comparative view is taken at the international level.¹⁰ Against this backdrop, it has become important to discuss the convergence and divergence of opinions regarding the competition law issues relating to SSOs, SEPs and FRAND. A comparative study of competition laws relating to SEP may help solve complex questions surrounding the implementation of FRAND from a global perspective.

In particular, the ‘smart phone wars’ have revealed several competition law questions, illustrated by landmark cases in several competition jurisdictions involving Qualcomm. In China, for example, the National Development and Reform Commission (NDRC) issued an administrative decision that imposed a fine of US\$975 million in February 2015 against Qualcomm for its abuse of a market-dominant position in violation of the Anti-Monopoly Law (AML).¹¹ Similarly, in December 2016, the Korea Fair Trade Commission (KFTC) decided that Qualcomm violated a Korean competition law, the Monopoly Regulation and Fair Trade Act (MRFTA). The KFTC found that Qualcomm had coerced mobile phone manufacturers to include unfair licensing terms and had refused to license its rival chipset producers by using its market position and avoiding its FRAND commitments, which constituted unlawful practices under the MRFTA.¹² One of the reasons why the Qualcomm cases in Asia attracted the attention of competition lawyers around the world is that the two authorities’ fines were the largest in the history of their public enforcements. In addition, the US Federal Trade Commission (FTC) drew analogous conclusions in January 2017 when it filed a

7. For an economic analysis, see Anne Layne-Farrar, ‘The Economics of FRAND’, in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 58.

8. Marco Lo Bue, ‘Are These Cartels? Price Guidelines Adopted by Standard Setting Organisations’ (2016) 7 JECLAP 537, 538.

9. For attempts to specify FRAND, see, eg, Roberto Grasso, ‘Standard Essential Patents: Royalty Determination in the Supply Chain’ (2017) 8 JECLAP 283.

10. There have been numerous competition issues relating to SEP and FRAND, including the process of standardization, patent ambush and FRAND ambush. See generally Steven Anderman, ‘The IP and Competition Interface: New Developments’, in Steven Anderman and Ariel Eizrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP, Oxford 2011) 3.

11. NDRC Price Supervision Bureau Penalty (2015) No. 1. For further detail, see Thomas K Cheng, ‘The IP-Antitrust Interface in China: Uncharted Territory’, in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 133. The Chinese competition regime has three competition agencies: the Ministry of Commerce (MOFCOM); the State Administration of Industry and Commerce (SAIC); and the NDRC. The MOFCOM oversees merger control, and the other two authorities deal with anti-competitive practices. The SAIC is responsible for the enforcement of business practices not involving pricing, while the NDRC applies the legal provisions on pricing conducts. See also D Daniel Sokol and Wentong Zheng, ‘FRAND (and Industrial Policy) in China’, in Jorge L Contreras (ed), *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents* (CUP, Cambridge 2018) 307.

12. KFTC Decision No. 2017-025, 2015Sigam2118, 20 January 2017. See also Sang-Seung Yi and Yoonhee Kim, ‘FRAND in Korea’, in Jorge L Contreras (ed), *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents* (CUP, Cambridge 2018) 321.

complaint charging Qualcomm with using anti-competitive tactics, including failing to respect its FRAND commitments.¹³

The global Qualcomm cases highlight the recent competition law approaches to SEP holders, especially involving abuse of market dominance and/or unfair methods of competition. They are of paradigmatic significance for the intersection between competition law and intellectual property (IP) law. While there are also numerous FRAND cases being litigated privately,¹⁴ this article focuses on the public enforcement of competition law related to FRAND commitments because public enforcement indicates the unique features of the competition regimes. This article aims to uncover guiding principles from a comparative perspective. In four sections following the Introduction, the article proceeds as follows. Section 2 discusses the beneficial and prejudicial effects of SEPs and includes an overview of international convergence and divergence with respect to their assessments from a competition law perspective. Section 3 explains the existing approaches of numerous competition regimes to SEPs, including those of the US and the EU. Section 4 compares SEP cases in Asian countries such as China and Korea with similar case law in the EU and the US. Lastly, section 5 provides a summary and the conclusions of this article.

2 THEORETICAL DISCUSSIONS ON STANDARD ESSENTIAL PATENTS

2.1 Beneficial and prejudicial effects of technological standards

In a world of increasing digitalization and mobility, technical standards are more important than ever.¹⁵ Their impact on competition is double-edged. Standards are predominantly beneficial since they allow interoperability. In particular, when a certain market tends to move towards a harmonized form of function or product, technological standard setting may generate pro-competitive outcomes by creating externalities, such as interconnectivity and network effects.¹⁶ Not surprisingly, network effects play an important role in the functioning of the SEP system, which generates positive network externalities like the creation of a ‘positive feedback loop’.¹⁷ Thanks to standardization, consumers can use a wide range of devices and functions which are all compatible with each other.¹⁸ Standards can thus be a driver of innovation. Commentators argue that, when there are strong network effects, we can observe intense competition between technologies for the market; the economic entities prefer diversity to standardization, which

13. FTC, 17 January 2017, *FTC v Qualcomm*, US District Court for the Northern District of California.

14. For example, there are a number of landmark cases in China and Korea relating to the enquiries on competition law violations for breaches of FRAND terms, eg, *Huawei v InterDigital* in China and *Samsung v Apple* in Korea. See Sokol and Zheng (n 11) 315–17; Yi and Kim (n 12) 322–4.

15. See generally American Bar Association (ABA), *Handbook on the Antitrust Aspects of Standards Setting* (ABA Publishing 2004) 1.

16. See also Alden F Abbott and Nicholas J Kim, ‘Standard Setting and Hold-ups under Section 5 of the Federal Trade Commission Act’ in Steven Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP, Oxford 2011) 330–31.

17. ABA (n 15) 12–14.

18. Robert P Merges, Peter S Menell and Mark A Lemley, *Intellectual Property in the New Technological Age* (4th edn, Wolters Kluwer, New York 2007) 1197.

brings ‘standards wars’.¹⁹ On the other hand, the industry-wide setting of standards may facilitate collusion, exclusion and exploitation. Therefore, it is essential to discuss the pros and cons of standards in order to develop a competition law approach which allows collecting the fruits of standardization while preventing possible abuse.

Commentators seem to agree that there are noteworthy benefits from standards, as they can improve economies of scale, information flows and consumer welfare through providing interoperability while reducing transaction costs.²⁰ Standards not only improve static, they also improve dynamic efficiency since they encourage innovation, not only with respect to the standards-compliant products but also with respect to follow-on innovation. On a more detailed level, standards increase the utility of ICT networks since they improve interoperability and thus increase the number of other users, benefitting all users.²¹

Despite the benefits of standards, there are some anti-competitive concerns about the SEP holders’ powers in the market. In particular, standards may generate the problem of market entry barriers that impede the progress of innovation. Moreover, a standardization process can facilitate collusion among competitors, and it can affect market structure by excluding competitors. Furthermore, the SEP holder can possess the market power to impose excessive royalty rates or unfair licensing conditions due to the lack of competitive alternatives to the SEP technology.²² The market power is created by the SSO’s selection of a certain standard since patents essential to the respective standard are no longer substitutable.²³ In addition, there are other concerns with respect to the activities of SSOs, for example regarding restrictions on diversity and on consumer choice as well as a concerted refusal to deal.²⁴

To conclude, basically, IP rights provide exclusivity that offers monopoly rents to IP holders, thereby improving incentives for innovation. However, these exclusive rights create tensions with competition law, which aims at strengthening the competitive process thus enhancing efficiency and welfare. Some observers derive from this friction a fundamental conflict between IP and competition law.²⁵ However, there is growing consensus that IP and competition law share the common goal of fostering innovation and consumer welfare.²⁶ Most competition regimes across the world also

19. Timothy S Simcoe and Allan L Shampine, ‘Economics of Patents and Standardization: Network Effects, Hold-up, Hold-out, Stacking’, in Jorge L Contreras (ed), *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents* (CUP, Cambridge 2018) 101–2.

20. ABA (n 15) 2.

21. *In re Rambus*, US FTC, Docket No. 9302, opinion of the Commission (2 August 2006) 3 <www.ftc.gov/sites/default/files/documents/cases/2006/08/060802commissionopinion.pdf> accessed 29 August 2017. See also US DOJ and FTC (n 5) 33–34. See also Monica Armillotta, *Technology Pooling Licensing Agreements: Promoting Patent Access Through Collaborative IP Mechanisms* (Nomos 2010) 37; Michael A Carrier, ‘Standard Setting Analysis under US Law’ in Steven Anderman and Ariel Ezrachi (eds), *Intellectual Property and Competition Law: New Frontiers* (OUP, Oxford 2011) 355.

22. Mark R Patterson, *Antitrust Law in the New Economy* (Harvard Univ. Press 2017) 195.

23. US DOJ and FTC (n 5) 38.

24. Carrier (n 21) 366–7.

25. Gary Myers, *The Intersection of Antitrust and Intellectual Property: Cases and Materials* (Thomson/West 2007) 3.

26. See eg, Yo Sop Choi and Andreas Heinemann, ‘Restrictions of Competition in Licensing Agreements: The Worldwide Convergence of Competition Laws and Policies in the Field of Intellectual Property’ (2016) 17 EBOR 405, 406–7; Alison Jones and Brenda Sufrin, *EU Competition Law: Text, Cases, and Materials* (6th edn, OUP, Oxford 2016) 37–9.

acknowledge that appropriate standard setting is important in order to promote technological progress and generate pro-competitive effects.²⁷ Therefore, antitrust assessments of the activities of SSOs and the effects of SEPs should be undertaken carefully and sanctions should be imposed only where the anti-competitive results outweigh the pro-competitive effects of standardization.²⁸

2.2 Converging and diverging views on SEPs: the diverse backgrounds of competition laws

The competition regimes in the world have developed their own competition (law) cultures which often differ from each other. With regard to unilateral conduct, the differences are even bigger than in other fields of competition law. For example, the history of US antitrust law has adapted itself considerably to changes in economic theories and schools, focusing strongly on economic principles such as, for example, an efficiency-oriented analysis.²⁹ Similar to the example of the US, other competition regimes, including the EU, have modernized their competition rules following the development of economic theories and legal techniques, moving from form-based to more effects-based approaches. Nonetheless, many competition regimes have maintained particular features regarding market power and monopolies. In the EU, for instance, despite the strengthening of welfare analysis within competition law, significant weight is given to the protection of the competitive process over a pure efficiency analysis. The EU approach frequently seems to be attractive for countries which are part of regional integration agreements and which therefore also consider competition law as an instrument to strengthen the integration of transnational markets.

Most of all, the idea of a 'special responsibility' of dominant undertakings,³⁰ which has been developed in EU competition law, is influential in the competition regimes of developing countries because the developing world has experienced a high degree of economic concentration, which has brought notable socio-political problems. In other words, they often have a critical view of large conglomerates. Moreover, most civil law countries prefer legal certainty by providing bright-line statutory provisions instead of a general weighing in the tradition of the *rule of reason* analysis prevalent in US case law. Here, a rules-based approach developed by the EU, for example, via block exemption regulations (BERs), is an attractive model.³¹

Similar to the EU competition regime, numerous Asian competition regimes provide the regulatory frameworks of objectives of the law, presumptions of market dominance based on market share, and various guidelines relating to abuse of market dominance and licensing agreements. In particular, the competition regimes of Korea

27. US DOJ and FTC (n 5) 33.

28. ABA (n 15) 14.

29. See, eg, *Kimble v Marvel Entertainment LLC*, 135 S. Ct. 2401, 2412–13 (2015): 'We have therefore felt relatively free to revise our legal analysis as economic understanding evolves and ... to reverse antitrust precedents that misperceived a practice's competitive consequences'.

30. See, eg, Case 85/76 *Hoffmann-La Roche v Commission*, ECLI:EU:C:1979:36.

31. For example, most Asian competition regimes, including those in Korea and China, have adopted soft laws that are similar to the EU BERs by providing safe harbour based on market share thresholds. In particular, the safe harbour threshold of 20% of market share in IPR licensing was suggested by Jorde and Teece. See Thomas M Jorde and David J Teece, 'Innovation, Cooperation, and Antitrust', in Thomas M Jorde and David J Teece (eds), *Antitrust, Innovation, and Competitiveness* (OUP, Oxford 1992) 56.

and China, as illustrated by the competition chapters in their free trade agreements, have adopted legal techniques prevalent in the EU competition regime.³² In addition, the recent adoption and/or revision of IP guidelines and the decisions on Qualcomm by the competition agencies in the two countries have indicated their distinctive backgrounds and approaches to the interaction between competition law and IP law.

It is important to understand the underlying goals of competition laws before discussing the convergence and divergence of antitrust assessments among competition regimes. Just as in the US and the EU, basic concepts differ in Korea and China. However, unlike the situation in the US and the EU, where there is no uniform view on the goal of their respective competition regimes, the competition laws of Korea and China explicitly clarify their objectives. Article 1 of the Korean MRFTA articulates that its purpose is to improve *fair and free* competition through preventing anti-competitive and unfair practices,³³ thereby ensuring creative business activities, consumer protection and balanced economic growth. Similarly, Article 1 of the Chinese AML states that its aim is to prevent monopolistic practices, protect fair market competition, improve efficiency, ensure consumer interest and social public interest, and promote the development of a socialist market economy.

The statements in the MRFTA and AML highlight a range of diverse socio-political aims, which are mixed with the goal of economic efficiency. One of the unique features of these statutes is their focus on *fairness*.³⁴ Despite its vagueness, the idea of fair competition has affected the development of competition law in Korea and China by underlining the importance of public interest within the context of public enforcement. Accordingly, the competition authorities in these two countries have adopted and developed their guidelines regarding IP and competition law in view of the fair use of SEP rights.³⁵

Despite important convergence in global views on competition law issues, with regard to SEPs, there are diverging views because of the differing basic assumptions mentioned above.³⁶ This is particularly true for the issue of excessive pricing and licensing fees because each competition regime has different rules on exploitative abuse.

32. The competition chapters in the EU-Korea FTA and the Korea-China FTA are similar to the EU's substantive competition law provisions of Arts 101 and 102 of the Treaty on the Functioning of the European Union. See also Yo Sop Choi, 'A Study on the Bilateral Cooperation of Competition Law Enforcement under the Korea-EU FTA' (2013) 34 J EU Studies 3, 15.

33. The competition regimes in Korea and Japan heavily rely on their competition law provisions on unfair business practices that are a type of catch-all provision. See, eg, Yo Sop Choi and Kazuhiko Fuchikawa, 'Comparative Analysis of Competition Laws on Buyer Power in Korea and Japan' (2010) 33 World Competition 499, 512–14; Mark Furse, *Antitrust Law in China, Korea and Vietnam* (OUP, Oxford 2009) 259.

34. For a European perspective on 'fairness' in competition law, see, eg, Alfonso Lamadrid de Pablo, 'Competition Law as Fairness' (2017) 8 J Euro Comp L & Practice 147. See also Yo Sop Choi, 'The Role of Law in a Market Economy: Globalisation of Competition Law in Korea' (2014) 15 EBOR 419, 428.

35. See, eg, Stephanie Wu, 'China Publishes the 2nd Version of the Anti-Monopoly Guidelines on the Abuse of Intellectual Property Rights' CPI (17 April 2017) <www.competitionpolicyinternational.com/china-publishes-the-2nd-version-of-the-anti-monopoly-guidelines-on-the-abuse-of-intellectual-property-rights> accessed 9 December 2017.

36. It is often difficult to provide a common standard for assessing competition and IP among the competition regimes. See, eg, Nansulhun Choi and Yo Sop Choi, 'Recent Developments in Competition Law and Intellectual Property Relating to Reverse Payment Agreements: A Comparative Perspective' (2016) 6 QMJIP 380, 390.

Therefore, a comparative study of competition laws may aid our understanding of the recent developments with respect to SEPs.

3 COMPETITION LAW APPROACHES TO FRAND IN THE US AND THE EU

In the US, the view of the courts on patent ambush differs from the view found in the EU, as illustrated by the different outcomes of the *Rambus* case. Whereas the European Commission considered patent ambush as an abuse of a dominant position,³⁷ the US Court of Appeals for the DC Circuit did not find the nondisclosure to be an antitrust violation, instead reasoning that even if Rambus had disclosed its patents, the SSO might have adopted the standard in question. Hence, according to the DC Circuit, the non-disclosure only prevented a FRAND commitment; it did not violate the prohibition on monopolization pursuant to Section 2 of the Sherman Act, since, according to an often-cited passage of the DC Circuit's judgment, 'high prices and constrained output tend to attract competitors, not to repel them'.³⁸ Nevertheless, the general policy of SSOs to require FRAND commitments does not raise antitrust concerns. This is also true for recent efforts of SSOs to clarify the term 'FRAND'.³⁹ Therefore, the prevention of patent ambush has gained great importance despite the generous antitrust treatment that hold-up received should it still occur.

3.1 Recent case law in the United States

US antitrust law has a long tradition of ensuring licensing agreements are executed on reasonable and non-discriminatory terms.⁴⁰ However, the disrespect of FRAND commitments given in the context of an SSO is a rather new phenomenon, and no conclusive case law exists. Two prominent cases, *Google* and *Qualcomm*, shall be briefly presented here. However, these cases, the first one a settlement, the second one an FTC complaint which will have to be dealt with by the competent district court, only mark the beginning of analysing the antitrust problems of standard-setting agreements.

3.1.1 *Google and Motorola Mobility (MMI)*

The US antitrust case against Google is well known for having been settled without finding 'search bias' or any other manipulations of the search algorithm that might amount to an antitrust infringement.⁴¹ This is different from the outcome in the EU where Google has been fined for abuse of a dominant position by giving an illegal advantage to its comparison shopping service.⁴² However, the US case has also an SEP aspect since,

37. See Commission, Decision of 9.12.2009 – *Rambus*, OJ 2010 C 30/17. The case was resolved by future commitments; no fines were imposed.

38. *Rambus v FTC*, 522 F3d 456, 466 (DC Cir 2008). See also *Verizon Communications Inc v Law Offices of Curtis V Trinko LLP*, 540 US 398 (US Sup Ct 2004).

39. Lo Bue (n 8) 539–40.

40. See *Hartford-Empire Co v United States*, 323 US 386 (US Sup Ct 1945).

41. US FTC, Press Release, 'Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns in the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search' (1 March 2013) <www.ftc.gov/opa/2013/01/google.shtm> accessed 9 December 2017.

42. Commission, 27.6.2017 – *Google Search (Shopping)*.

in 2012, Google had acquired Motorola Mobility (MMI), including a large patent portfolio of which hundreds of patents are essential to industry standards. The US FTC accused Google of reneging on its FRAND commitments by pursuing injunctions in federal district courts and the US International Trade Commission (ITC). The FTC explicitly used the phrase ‘patent hold-up’ and pointed to the danger of higher prices being passed on to consumers and to the risk of companies abandoning the standard-setting process and reducing their investment.⁴³ In the settlement between the FTC and Google, these concerns were addressed by the agreement’s prohibition against seeking injunctions against willing licensees, thus confirming the company’s FRAND commitments.

3.1.2 *Qualcomm*

In January 2017, the US FTC filed a complaint in the US District Court for the Northern District of California alleging that Qualcomm pursued anti-competitive strategies to continue its monopolistic position in the supply of a main semiconductor device for mobile phone manufacturing and other consumer goods.⁴⁴ The FTC found that Qualcomm had market power, even a dominant position, and that it had imposed burdensome and anti-competitive supply and licensing conditions, thereby excluding its competitors.⁴⁵ The company’s SEPs lie at the heart of the anti-competitive concerns: The FTC emphasized the importance of the FRAND commitment relating to the exercise of SEP rights. It explained that, where the holder of a FRAND-encumbered patent negotiates a licensing agreement, the patentee needs to propose reasonable royalty rates in the courts in case parties fail to reach an agreement.⁴⁶ The FTC pointed out that Qualcomm had threatened to disrupt mobile phone manufacturers’ supply of baseband processors in order to impose licence terms for its SEP that they would otherwise not have received. The authority considered these royalties a tax on the manufacturers’ use of competing products, which excluded Qualcomm’s rivals from the market.

The FTC asserted that Qualcomm’s exclusion of its competitors had impeded innovation and harmed consumer welfare in three ways. First, Qualcomm maintained, according to the complaint, a policy of ‘no licence, no chip’, which is based on the condition that Qualcomm will supply its baseband processors only where the manufacturers agree to the licence terms preferred by Qualcomm. According to the FTC, this business practice made the manufacturers pay elevated royalties on products incorporating rivals’ processors. Second, the FTC alleged that Qualcomm had refused to license SEPs to its competitors despite its FRAND commitment. Third, the authority argued that the undertaking had extracted exclusivity from Apple in exchange for reduced patent royalties. In other words, Qualcomm prevented Apple from sourcing baseband processors from its competitors. Correspondingly, the FTC asked the federal court to order Qualcomm to end its anti-competitive practice.⁴⁷ It will be the task of the district court to decide if there was a violation of FRAND commitments, and if this violation amounted to an antitrust infringement.

43. US FTC (n 41).

44. US FTC (n 6).

45. *Ibid.*

46. *Ibid.*

47. *Ibid.*

3.2 The EU's regulation of FRAND commitments

Contrary to the situation in the US, EU competition law has a precedent regarding the assessment of injunctions despite FRAND commitments, which comes from the 2015 case *Huawei Technologies Co Ltd v ZTE Corp and ZTE Deutschland GmbH*.⁴⁸ Four years earlier, the European Commission had already set rules on the subject in its Horizontal Guidelines. The Commission's decisions in the *Motorola Mobility* case⁴⁹ and in the *Samsung* case⁵⁰ followed. These developments will be presented first before the *Huawei* case is analysed.

3.2.1 The European Commission's Horizontal Guidelines

The guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union (TFEU) to horizontal cooperation agreements (Horizontal Guidelines, or Guidelines)⁵¹ are supposed to give businesses clear guidance so they can assess the competition law compatibility of cooperation between companies operating on the same level of the supply chain. The text explains the basic principles and contains more specific chapters on information exchange, R&D agreements, production agreements, purchasing agreements, agreements on commercialization, as well as standardization agreements. The text was apparently inspired by the model of US antitrust guidelines, adding hypothetical case examples to the general explanations. The chapter on standardization agreements is relevant for our context. It analyses the competition concerns of such agreements and strives to show how problems may be avoided.

In particular, the Guidelines contain a safe harbour for standardization agreements: there is no restriction of competition in the sense of Article 101(1) TFEU if the participation in standard setting is unrestricted and transparent, if there is no obligation to comply with the standard, and if access to the standard is granted on FRAND terms. Moreover, the existence of relevant IP rights has to be disclosed in good faith.⁵² The Commission cannot infer a breach of competition law based on disrespect of these requirements. Rather, an analysis on a case-by-case basis would then be necessary.

3.2.2 Motorola Mobility and Samsung

The Horizontal Guidelines do not deal with the question of how competition law should assess a situation in which injunctive relief is sought despite a FRAND commitment. The European Commission gave a clear answer in the *Motorola Mobility* and *Samsung* cases. In *Motorola Mobility*, the Commission decided that a request for injunctive relief based on a FRAND-encumbered patent is considered an abuse of a dominant position if the implementer is willing to conclude a licensing agreement on FRAND terms. Moreover, preventing the licensee from challenging the validity of the patent or from

48. Case C-170/13, ECLI:EU:C:2015:477.

49. Commission, *Motorola*, OJ 2014 C 344/6 (summary).

50. Commission, *Samsung*, OJ 2014 C 350/8 (summary).

51. Commission, OJ 2011, C 11/1 of 14.1.2011.

52. Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, OJ 2011/C 11/1 (14 January 2011) (Horizontal Guidelines), n 277 et seq and n 292 et seq, with a description of FRAND commitments in n 287 et seq.

pleading non-infringement of the patent is likewise anti-competitive.⁵³ However, since this was the first decision in the field so far, and there was contradictory case law by the courts of the EU Member States, the Commission did not impose a fine.

The same line of reasoning was followed in the *Samsung* litigation, differing only in that this case was concluded by a commitments decision pursuant to Article 9 of Regulation 1/2003.⁵⁴ In *Samsung*, the Commission developed a safe harbour in favour of potential licensees. Wilfulness of the implementer to conclude a licensing agreement on FRAND terms is assumed if the duration of licence negotiations is restricted to 12 months, and if the parties accept that the terms will be determined by a court or – upon mutual agreement – by an arbitration tribunal, should those negotiations fail.⁵⁵

3.2.3 *The Huawei case of the European Court of Justice*

Contrary to the cases mentioned before, the *Huawei* case⁵⁶ did not take its starting point from public enforcement of competition law but from a private patent infringement procedure in Germany. A first-instance court in Düsseldorf had to decide on a dispute between two Chinese firms from Shenzhen. Huawei gave FRAND commitments to the European Telecommunications Standards Institute (ETSI) with respect to its SEPs for the Long-Term Evolution (LTE) standard (fourth-generation mobile phone systems). ZTE used the standard and therefore Huawei's standard essential patents. After licensing negotiations failed, Huawei filed a suit for injunctive relief, presentation of accounts, recall of products and damages. According to an option offered by EU law to all courts in the Member States, the court in Düsseldorf referred several questions to the ECJ for a preliminary ruling pursuant to Article 267 TFEU and thus gave the ECJ the opportunity to give its view on FRAND.

The ECJ distinguished between actions for injunctive relief and actions for damages. Since claims for damages (and for the presentation of accounts) do not directly affect the market access to products, they do not violate Article 102 TFEU. This is different for injunctive relief (and for the recall of products) because market access is impeded and competition is restricted. However, as far as the exercise of IP rights is concerned, a competition law violation can only be found in 'exceptional circumstances'.⁵⁷ The ECJ considered SEPs as 'exceptional': whereas normally inventing around is possible so that patents do not prevent the emergence of competing

53. *Motorola* (n 49).

54. *Samsung* (n 50).

55. *Ibid* [15] et seq.

56. *Huawei* (n 48). For an analysis of this decision, see, eg, Sean-Paul Brankin, Salomé Cissal de Ugarte and Lisa Kimmel, '*Huawei/ZTE*: Towards a More Demanding Standard of Abuse in Essential Patent Cases' (2016) 7 JECLAP 520; Andreas Heinemann, 'Standard-Essential Patents in Standard Setting Organizations: Competition Law and the Realization of Licensing Commitments' (2015) 10 Journal of Intellectual Property Law & Practice (JIPLP) 947; Hanns Ullrich, 'FRAND Access to Open Standards and the Patent Exclusivity: Restating the Principles', Max Planck Institute for Innovation and Competition Research Paper No. 17-04 (2017).

57. Eg, *Samsung* (n 50) [52], [55], [56], [66], [68]. See also Steven Anderman and Hedvig Schmidt, *EU Competition Law and Intellectual Property Rights: The Regulation of Innovation* (2nd edn, OUP, Oxford 2011) 1; Martin Angelov, 'The "Exceptional Circumstances" Test: Implications for FRAND Commitments from the Essential Facilities Doctrine under Article 102 TFEU' (2014) 10 Euro Comp J 37; Björn Lundqvist, 'Competition Law as the Limit to Standard-setting' in Josef Drexler and Fabiana Di Porto (eds), *Competition Law as Regulation* (Edward Elgar Publishing, Cheltenham 2015) 390.

products, SEPs are different since products conforming to the standard can only be manufactured by using the relevant patent. For this reason, a fair balance between the interests concerned has to be established. In *Huawei*, the ECJ has developed an approach which is essentially procedural in character. If the parties follow the road map sketched out by the ECJ, there is no competition law violation on the side of the SEP holder and no patent law infringement on the side of the implementer.

In essence, the following steps have to be taken: Before bringing an action for injunctive relief, the patent owner has to confront the implementer with the supposed patent infringement and has to specify the patent(s) concerned. If the alleged infringer expresses its willingness to conclude a licensing agreement on FRAND terms, it is the task of the patent owner (not of the implementer) to submit an offer to license, including the licence fee and a description of how it is calculated. If the implementer does not accept the offer, it has to promptly submit a counteroffer on FRAND terms. From the time the counteroffer is rejected, the patent user has to provide appropriate security, for example, by a bank guarantee or by placing the relevant amount of money on deposit. The parties can agree to hire an independent third party to determine the FRAND terms. The implementer keeps the right to challenge the validity, the standard-essential nature, or the actual use of the patent in question.⁵⁸ The parties have to act diligently and in accordance with recognized commercial practices, avoiding inadmissible delaying tactics. It is the task of the lower courts to apply this road map to specific cases. Indeed, a rich body of case law has developed in EU Member States dealing with many specific problems left open by the ECJ.⁵⁹ It remains to be seen if there is a further need of clarification by the highest court of the EU. Based on the case law, the European Commission has adopted a Communication on the SEP topic reiterating the ECJ's road map and adding many other aspects, for example, on the tasks of SSOs.⁶⁰

3.2.4 Dominant position relating to SEPs

The principles described above are derived from Article 102 TFEU, which prohibits the abuse of a dominant position. Whereas in the *Huawei* case, the ECJ focused intensely on the concept of abuse, it did not have to deal with the existence of a dominant position since there was no dispute with respect to this question *in casu*.⁶¹ In its Horizontal Guidelines, the European Commission has held that 'there is no presumption that holding or exercising IPR essential to a standard equates to the possession or exercise of market power. The question of market power can only be assessed on a case by case basis'.⁶² However, this question is open to debate. For example, according to the Advocate General in the *Huawei* case, the existence of an SEP permits a (rebuttable) presumption

58. *Huawei* (n 48) [60] et seq.

59. Peter Picht, 'FRAND Wars 2.0' – Rechtsprechung im Anschluss an die Huawei/ZTE-Entscheidung des EuGH, Printversion: WuW 2018, 234–241 (Teil I), 300–309 (Teil II); for an important British case, see Damien Neven and Pierre Régibeau, 'Unwired Planet vs Huawei: A Welcome Clarification of the Concept of FRAND and of the Role of Competition Law Towards SEP Licensing' (2017) 8 JECLAP 463; Peter Picht, 'Unwired Planet v. Huawei: A Seminal SEP/FRAND Decision from the UK' [2017] GRUR Int 569.

60. Commission, Setting Out the EU Approach to Standard Essential Patents, Communication COM (2017) 712 final of 29 November 2017.

61. *Huawei* (n 48), fns 28, 43.

62. Commission – Horizontal Guidelines (n 52) [269].

that there is a dominant position on the market.⁶³ In any event, SEPs do not excuse the court from the important task of defining the relevant markets and determining market power. If there are real alternatives to the standard in question, or if the countervailing power of the other side of the market is strong, the SEP owner's leeway may be restricted so that a dominant position cannot be established. However, no general statements are possible; all depends on the circumstances of the case.

3.3 Converging views on FRAND

Observers often underline the differences between US antitrust law and EU competition law, especially when it comes to unilateral conduct.⁶⁴ The different outcomes of the *Rambus* case may be mentioned in this context.⁶⁵ However, a closer look at the competition law assessment on the violation of FRAND commitments presents a different picture. In both jurisdictions, the very sense of FRAND commitments is seen in the prevention of patent hold-up. Consequently, the disrespect of FRAND commitments raises competition law concerns. Whereas in the EU, the ECJ has given clear guidance in the *Huawei* case on the competition law treatment of FRAND commitments, the case law in the US still has to be developed. However, there does not yet seem to be a transatlantic divide on this question. Reneging on FRAND commitments does not appear to be competition on the merits.⁶⁶ In the following section, we will see that important jurisdictions in Asia share this view.

4 COMPETITION LAW APPROACHES TO FRAND IN ASIA

Most Asian competition regimes have adopted the European competition approaches, possibly due to their civil law traditions that require predictability and legal certainty. In particular, Asian competition regimes often demand a certain degree of fairness in market competition,⁶⁷ which results in a strong preference for EU-style competition law.⁶⁸ Interestingly, the Asian competition regimes often emphasize the role of public enforcement to ensure the functioning of the competitive process in the market. This starting point also extends to IP-related cases. In line with this, the competition authorities of China and Korea have issued important decisions, particularly those with respect to Qualcomm,⁶⁹ and they have adopted IP-related guidelines, which share similar views on SEPs and FRAND in the US and the EU.

63. Advocate General Wathelet, Opinion of 20.11.2014, ECLI:EU:C:2014:2391 – *Huawei Technologies*, [57], [58].

64. For a more nuanced view, see Harry First, 'Exploitative Abuses of Intellectual Property Rights' in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 222, which identifies IP-related areas where US antitrust law is used to control excessively high prices.

65. See *supra* at the beginning of section 3.

66. See also Alison Jones, 'Standard-Essential Patents: FRAND Commitments, Injunctions and the Smartphone Wars' (2014) 10 *Euro Comp J* 1, 30–31.

67. See, eg, Anderman and Schmidt (n 57) 27.

68. See, eg, David J. Gerber, *Global Competition: Law, Markets, and Globalization* (OUP, Oxford 2010) 207.

69. The European Commission also investigated whether Qualcomm's licensing terms and royalties were excessively high, which would have infringed its FRAND commitments, but the Commission eventually withdrew its proceedings. See also Anderman and Schmidt (n 57) 154.

4.1 The approach of the Chinese competition authority: the *Qualcomm* case

It is beyond doubt that the Chinese *Qualcomm* case⁷⁰ has become one of the most important cases in Asia. In 2015, the NDRC issued its decision based on its investigation of possible abuses of market dominance by Qualcomm. In this case, the NDRC defined a relevant market as the licensing market for SEP and the market for sales of baseband chips for Code Division Multiple Access (CDMA), Wideband CDMA (WCDMA), and LTE wireless communications, namely the markets for the licensing of SEPs and chipsets.⁷¹ Regarding the SEP licensing market, the NDRC concluded that the undertaking had included package licensing, the so-called portfolio licences, which indicated 'a collection of every independent licensing market of SEPs held by Qualcomm'. It also decided that 'a collection of countries or regions where Qualcomm has SEPs' was a geographic market.⁷²

The NDRC seemed to easily conclude that Qualcomm had a market-dominant position based on the presumption of market dominance in Article 19(1) AML, which is market-share focused, ie, 50 per cent market share.⁷³ It alleged that there was no alternative in that SEP licensing market, leading to a 100 per cent market share, and considered other factors before concluding that there was market dominance.⁷⁴ First, Qualcomm could control the relevant market because the mobile manufacturers could not produce mobile devices without risking its initiating patent infringement lawsuits or seeking injunctions. Second, the manufacturers heavily relied on its SEP portfolio since each SEP is indispensable and irreplaceable. Third, the entry barrier was very high as competing technologies are excluded from the standards when a patent is incorporated into a standard, and the switching cost was very high.⁷⁵ The NDRC also concluded that Qualcomm was dominant in the chip market based on similar grounds.⁷⁶

The NDRC further found Qualcomm's violation of the competition rule on abuse of market dominance under Article 17 AML. It concluded that Qualcomm unfairly charged excessive royalty fees for its SEP for the following four reasons. First, Qualcomm included some expired CDMA SEPs in licensing agreements and failed to prove that the expired SEPs equalled the value of the patents that were newly added to the portfolio during the terms of the licences. Second, it failed to provide patent lists to licensees and set constant long-term royalty rates, including expired ones in its portfolio, thereby making the licensees pay on expired patents. Third, it forced some licensees to grant back their patents on a royalty-free basis and asked some to waive their litigation rights over their patents against Qualcomm and its customers. Fourth, the portfolio licence included non-SEPs for wireless communications, thereby charging unfairly high royalty fees, and the royalty rates were based on the wholesale net sale prices of mobile phone devices. The NDRC further decided that Qualcomm tied non-SEPs to SEPs and that it placed conditions of sales of baseband chips in the agreements.⁷⁷ To summarize, the

70. NDRC (n 11).

71. See also Liyang Hou, 'Qualcomm: How China Has Invalidated Traditional Business Models on Standard Essential Patents' (2016) 7 J Euro Comp L & Practice 686.

72. H Stephen Harris, 'An Overview of the NDRC Decision in the Qualcomm Investigation' (2015) 2 CPI Antitrust Chronicle 2 <www.competitionpolicyinternational.com/assets/Uploads/HarrisJul-152.pdf> accessed 12 August 2017.

73. This presumption is very similar to that in the Korean MRFTA.

74. Cheng (n 11) 133.

75. See also Hou (n 71) 678.

76. Harris (n 72) 2–3.

77. Cheng (n 11) 134; Harris (n 72) 4.

NDRC concluded that Qualcomm charged unfair licensing fees (excessive pricing), and imposed tying and unfair licensing conditions.⁷⁸

According to some commentators, the Chinese Qualcomm case is meaningful because it shows that the NDRC conducted close analyses on complex issues, such as the intersection of competition law and IP law, which also confirms active enforcement by China on complex IP-related cases.⁷⁹ However, Harris argues that the NDRC's broad language may generate the problem of insoluble conflicts of the two bodies of law, ie, IP law and competition law, especially when the competition agencies in multiple jurisdictions impose incoherent licensing obligations on the SEP holders. Furthermore, the NDRC's decision appeared to bring more enquiries than answers regarding the appropriate role of competition law relating to IP licensing.⁸⁰ In addition, the existence of SEPs may easily lead to the presumption of market dominance, possibly due to the presumption of market dominance provision in Article 19, similar to that in Korea, as will be discussed below.

4.2 The approaches of the Korean competition regime: the *Qualcomm II* case

The KFTC has vigorously enforced the MRFTA, extended to large multinational undertakings where their practices have anti-competitive effects on the Korean market,⁸¹ and it had to deal with several cases at the interface of IP protection and competition law.⁸² In effect, the context of the Chinese *Qualcomm* case is very similar to the KFTC's *Qualcomm* decision in 2009 (*Qualcomm I*),⁸³ in which the Seoul High Court upheld the KFTC decision.⁸⁴ The case is now pending in front of the Supreme Court of Korea. In *Qualcomm I*, the KFTC decided that Qualcomm held a market-dominant position in the CDMA modem chip market and abused its position by imposing discriminatory licensing terms, issuing conditional rebates and requesting royalty payments after its IPR expiration.⁸⁵ With respect to our topic, the Korean authority further issued a decision (*Qualcomm II*)⁸⁶ imposing on Qualcomm a fine of 1.03 trillion Korean Won (approximately US\$873 million). The KFTC explained that Qualcomm was an SEP holder with declared FRAND commitments to SSOs, including the International Telecommunication Union (ITU) and the ETSI, relating to mobile communications

78. Zhaofeng Zou, 'New Chinese Rules on Abusing IPRs: What Does it Mean for the Exercise of IPRs after the Qualcomm Case?' (2015) 38 *World Competition* 597, 602; Sokol and Zheng (n 11) 310.

79. Cheng (n 11) 136; Harris (n 72) 6.

80. Harris (n 72) 6.

81. See, eg, Yo Sop Choi, 'Analysis of the Microsoft, Intel and Qualcomm Decisions in Korea' (2010) 31 *ECLR* 470.

82. See Kyoung Yeon Kim, 'Recent Trends in KFTC Enforcement Activities regarding IPRs', *CPI* (July 2017); Hwang Lee, 'Competition Law and Intellectual Property in Korea' in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 158.

83. KFTC Decision No. 2009-281, 2009Jisik0329, 30 December 2009. The KFTC ended Qualcomm's abuses of market dominance, including discriminatorily high royalties, conditional loyalty rebates and requirement of royalties after the expiration of the patents. See, eg, Lee (n 82) 173.

84. Seoul High Court Judgment 2010Nu3932, 19 June 2013.

85. Haksoo Ko and Jeong Seo, 'Treatment of Patent Assertion Entities under Korean Antitrust Law' in D Daniel Sokol (ed), *Patent Assertion Entities and Competition Policy* (CUP, Cambridge 2017) 144.

86. KFTC Decision of *Qualcomm II* (n 12).

standards, consisting of CDMA, WCDMA and LTE. It further illustrated that Qualcomm was a vertically integrated undertaking which produced and sold modem chipsets, which indicates that Qualcomm held a notable market power.⁸⁷

As did the NDRC, the KFTC asserted that Qualcomm held market dominance in the market for the licensing of SEPs and the modem chip market⁸⁸ and that Qualcomm violated the MRFTA by breaching its FRAND commitments as follows. First, Qualcomm refused or restrained licensing of SEPs that were indispensable for manufacturing and distributing the chipsets. Second, it forced mobile phone manufacturers to sign unfair licensing agreements by misusing its market position, despite its FRAND commitments. Third, it provided a 'portfolio licence package' to the mobile phone manufacturers and imposed unfair licensing terms.⁸⁹

In particular, the KFTC focused on competition issues relating to the breach of FRAND commitments, especially where there was no alternative to the SEP,⁹⁰ and decided that Qualcomm's business practices constituted both an abuse of market dominance and unfair business practices which violated Articles 3-2 and 23 MRFTA, respectively.⁹¹ The KFTC imposed remedies that required Qualcomm to sincerely engage in licensing negotiations upon the requests of modem chipset producers. The KFTC also required it to terminate its coercive practices of undue licensing agreements and respond to the requests of mobile phone manufacturers regarding renegotiations of their licensing contracts.⁹²

The KFTC further clarified the details of its investigations, including its hearings regarding a consent decree that was not accepted. The KFTC explained that its remedies were intended to turn 'a closed ecosystem that allows Qualcomm to be an exclusive beneficiary into an open ecosystem where anyone can enjoy the incentives of innovation that one has achieved'.⁹³ This seems to focus on the 'public interest' relating to the implementation of competition law involving SEP and FRAND in Korea.

4.3 Competition law of the SEPs: some discussions in Asia

4.3.1 *Discussions on competition concerns: convergence in Asia*

Competition law has developed through dealing with the emergence of new markets, industries or sectors. A new market or field can frequently be dominated by a few firms, which raises anti-competitive concerns. The field of SEPs is no exception. Most countries allow companies to benefit from the rewards that come from the exclusivity of IP, which improves competitive innovation where the holder can enjoy exploiting the innovation.⁹⁴ This may improve the welfare of the society as a whole, but the case of SEPs seems somewhat different because the public often expects 'special responsibility'

87. KFTC Decision of *Qualcomm II* (n 12) [73]–[75]. See also KFTC Press Release, 'KFTC Imposes Sanctions Against Qualcomm's Abuse of SEPs of Mobile Communications' (28 December 2016) 1.

88. KFTC Decision of *Qualcomm II* (n 12) [183]–[199].

89. KFTC (n 87) 1–2.

90. KFTC Decision of *Qualcomm II* (n 12) [30]–[34].

91. Article 23 of the MRFTA does not require evidence of market dominance of the undertaking but rather 'impediment to fair trade', a notion that combines anti-competitiveness and unfairness. See, eg, Ko and Seo (n 85) 135–36.

92. KFTC (n 87) 2.

93. *Ibid* 3.

94. ABA (n 15) 1.

from SEP holders in light of ‘exceptional circumstances’ because they can hold tremendous market power through standardization processes. Therefore, in numerous jurisdictions, like those in Asia, a new framework of competition law approaches appears necessary for the FRAND cases.

In particular, the concept of general public interest under certain circumstances seems to be a key factor of the FRAND test. In effect, the European test of ‘exceptional circumstances’ seems to make a strong case in favour of imposing special responsibility on SEP holders in Asia,⁹⁵ which demonstrates the influence of foreign case law. For example, in the *Qualcomm II* case, the KFTC uses the Western cases, including *Motorola*, *Samsung* and *Huawei* in the EU and *Motorola* and *Google* in the US,⁹⁶ to buttress its conclusion that Qualcomm violated Article 3-2 MRFTA, which highlights a converging view of antitrust liability for breaching FRAND commitments.⁹⁷ As in the US and the EU, in Asia, the mere existence of IP rights itself does not indicate the creation of market power or an automatic presumption of abuse of market dominance. However, the acquisition of SEPs may imply the creation of market dominance; therefore, it is also important to distinguish the concerns about market power through IP rights from advanced technology or mere possession of SEPs.⁹⁸ This is similar to the approaches of the European Commission as shown in the *Samsung* and *Motorola* cases, considering the technical essentiality of the SEPs.⁹⁹ In conclusion, the competition regimes in the EU and Asia often emphasize their bans on exploitative abuse, and the FRAND commitment is the condition for preventing exploitation of additional market power that can appear from a SEP system, which reflects the implementation of competition rules concerning abuse of market dominance.¹⁰⁰

4.3.2 *The concept of fairness in competition law and SEPs in Asia: localized harmonization*

With regard to the exploitation of SEPs, some argue that there is notable inadequacy relating to the FRAND commitment because it is difficult to appropriately define the wordings of its ‘fair’, ‘reasonable’ and ‘non-discriminatory’ conditions.¹⁰¹ Moreover, competition authorities and courts are often hesitant to decide the range of reasonable prices or royalty rates. Accordingly, fair and reasonable terms will not be able to guarantee a specific amount of royalties, and it is often problematic where the SEP licensor tends to hold a higher conception of the meaning of a fair and reasonable level of royalties

95. For further discussions on the concept of ‘exceptional circumstances’ in the EU, see Ian Eagles and Louise Longdin, *Refusals to License Intellectual Property: Testing the Limits of Law and Economics* (Hart Publishing, Oxford 2011) 152.

96. KFTC Decision of *Qualcomm II* (n 12), [389]–[392].

97. See, eg, Haris Tsilikas, ‘*Huawei v. ZTE* in Context – EU Competition Policy and Collaborative Standardization in Wireless Telecommunications’ (2017) 48 IIC 151, 170.

98. US DOJ and FTC (n 5) 39.

99. Björn Lundqvist, *Joint Research and Development under US Antitrust and EU Competition Law* (Edward Elgar Publishing, Cheltenham 2015) 245.

100. See, eg, Chappatte and Walter (n 2) 380.

101. See, eg, Roberto Grasso, ‘The ECJ Ruling in *Huawei* and the Right to Seek Injunctions Based on FRAND-Encumbered SEPs under EU Competition Law: One Step Forward’ (2016) 39 World Competition 213, 215; Anne Layne-Farrar, ‘The Economics of FRAND’ in Roger D Blair and D Daniel Sokol (eds), *Antitrust, Intellectual Property, and High Tech* (CUP, Cambridge 2017) 58.

than licensees.¹⁰² Despite the ambiguous definitions, there are some discussions on the implementation of FRAND, as the condition of ‘reasonableness’ aims to eliminate the risk of monopolistic overcharges of royalties, and the wording of ‘non-discrimination’ should be implemented to prevent possible market foreclosure on the downstream level,¹⁰³ which can be examined under the concept of fair competition in Asia.

In times of expansion in competition law systems, a considerable overlap of big cases, such as those involving Qualcomm, can be observed.¹⁰⁴ Looking at the historical development of competition law around the world, the development of new technologies has forced competition authorities to adapt traditional methods to the new phenomena.¹⁰⁵ Many seem to agree that the ultimate objective of competition law is to protect competition itself or a competitive process by preventing certain types of business conduct that can harm the concept of fair and free markets.¹⁰⁶ It is thus beyond doubt that the field of SEPs, including royalty rates, falls within the scope of competition law, and some competition regimes, like those of Korea and China, strongly support fair competition, albeit with an ambiguous view of that concept. In other words, the competition regimes in this region focus on fair exploitation of SEPs.

In conclusion, standardization is a rapidly developing phenomenon relating to the digital revolution.¹⁰⁷ Preventing the exploitation of market dominance stemming from SEPs is likely to be difficult due to its complexity.¹⁰⁸ In particular, there is no single definition of FRAND terms in the global market, which makes the competition law assessment of SEP cases more difficult. It has to be stressed, in this context, that in Asia the idea of ‘big is often evil’ is widespread, especially when the business practice is considered adverse to social norms of competition in the respective jurisdictions.

4.4 Convergence of IPR Guidelines relating to FRAND

As discussed above, the *Qualcomm* cases have attracted significant attention to standardization issues and the problem of SEPs.¹⁰⁹ A remarkable convergence has developed among jurisdictions in Asia and competition law regimes in other parts of the world. For example, the Korea IPR Guidelines¹¹⁰ appear to follow the European approach, defining a violation of an SEP holder’s FRAND commitments as ‘an act of filing an injunction against willing licensees’.¹¹¹ Similar to the *Huawei* case in the EU, the Korean Guidelines articulate that an SEP holder who has given FRAND commitments

102. See, eg, Carrier (n 21) 359.

103. Armillotta (n 21) 35.

104. Eg, Andrew I Gavil and Harry First, *The Microsoft Antitrust Cases: Competition Policy for the Twenty-First Century* (MIT Press, Cambridge, MA 2014) 5.

105. Ibid 329.

106. See, eg, Merges, Menell and Lemley (n 18) 1115.

107. See Lundqvist (n 3) 365.

108. Mark A Lemley, ‘Intellectual Property Rights and Standard-Setting Organizations’ (2002) 90 Cal L Rev 1889, 1971.

109. See eg, Hwang Lee, ‘Overview of Competition Policy’ in Yanbei Meng and Hwang Lee (eds), *China-Korea IP & Competition Law Annual Report 2016, Volume I* (MRLC 2017) 169; Yi and Kim (n 12) 325.

110. KFTC Notice No 247, Review Guidelines on Unfair Exercise of Intellectual Property Rights, amended 23 March 2016.

111. The Chinese competition regime also provides a similar form and content of the Korean Guidelines, particularly relating to FRAND commitments. For further detail, see Cheng (n 11) 127–8.

has an obligation to negotiate with willing licensees, although this does not mean the SEP holder must make an automatic offer of a licence to a third party. In other words, where an SEP holder has significant market power due to the inclusion of its patents into the standard set by an SSO, the rules on market dominance can be applicable if it would block a willing licensee's access to the selected standard.¹¹²

Furthermore, the Korean Guidelines state that an SEP holder seeking an injunction under the duty of FRAND commitments may constitute an anti-competitive practice where the patentee would not appropriately negotiate with potential willing licensees because the injunction can be considered as 'beyond the legitimate scope' of IP under the MRFTA.¹¹³ This is in line with the argument that SEP holders should not earn more than the actual value attributable to their invention.¹¹⁴ At the same time, the importance of balancing free and fair competition with the effective protection of IPRs is underlined.¹¹⁵ In addition, the emergence of SEP cases will bring further convergence in developing IPR guidelines in Asia.¹¹⁶

5 CONCLUSIONS

Standardization is an important driver of innovation. However, the process of standardization may impede innovation if it generates anti-competitive effects. Important technology areas require the licensing of innumerable SEPs.¹¹⁷ There is no international standard for assessing antitrust problems arising from the infringement of FRAND commitments. Each competition regime has its own approach to SEP and FRAND in the light of its socio-economic background. For example, as the *Rambus* case has shown, US antitrust law is not so concerned with the charging of high prices, relying instead on the correcting effect of markets in the long term. Nevertheless, this does not prevent public enforcers from intervening to sanction the disrespect of FRAND commitments. The focus in this context is not only on the fact that higher royalty rates will often be passed on to the consumers, but also on the loss of trust in the standard-setting process and the resulting damage to innovation. In the EU, the negative effects on innovation are accorded the same importance. At the same time, the charging of prices beyond a FRAND level is a concern in itself. This reflects a particular feature of EU competition law, which not only prohibits exclusion but also exploitation by dominant firms. The legal situations in China and Korea are similar. However, in these jurisdictions, the standard of *fairness* in a very general sense also plays a predominant role with respect to competition law. Procedures employed by the competition authorities place the fairness of royalty fees and of licensing conditions centre stage. In so far as exploitative abuse is addressed by the concept of fairness, the framework in Asia is

112. Lundqvist (n 57) 367.

113. The Korean IP Guidelines, Section III.5.B. For further details, see also Yo Sop Choi, 'Competition Law and Policy on Issues Relating to Standard Essential Patents' (2017) 30 *Kookmin L Rev* 521, 535–6; Lee (n 82) 169.

114. See eg, Dan L Burk and Mark A Lemley, *The Patent Crisis and How the Courts Can Solve It* (University of Chicago Press, Chicago 2011) 160.

115. See, eg, Sean-Paul Brankin, Salomé Císnal de Ugarte and Lisa Kimmel, 'Huawei/ZTE: Towards a More Demanding Standard of Abuse in Essential Patent Cases' (2016) 7 *J Euro Comp L & Practice* 520, 522.

116. See, eg, Hou (n 71) 688.

117. Carrier (n 21) 369.

closer to EU competition law than US antitrust law. However, the differences should not be exaggerated. The goal of keeping markets open is common to all jurisdictions discussed here. In particular, standard-setting procedures should not be used to create closed shops to the detriment of static and dynamic efficiency. It is the task of competition law to guarantee 'open ecosystems',¹¹⁸ as the KFTC has so aptly put it in the *Qualcomm II* decision.

118. KFTC Press Release (n 87) 3.