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DEVELOPMENT OF THE FRAND JURISPRUDENCE IN CHINA

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Standard-essential patents ("SEPs") are patents that embody industry-adopted technical standards. While standardization presents many benefits, including interoperability of standardized products and lower manufacturing costs, to the consumers and the industries, it may also lead to the "hold-up" problem where a SEP holder demands a high royalty rate from an implementer using the standard-development leverage. To mitigate the hold-up problem, standard-setting organizations often require the participants to agree to license their SEPs to implementers on "fair, reasonable, and non-discriminatory" ("FRAND") terms.

In recent years, disputes concerning FRAND-encumbered patents have arisen frequently around the globe. In particular, China has become an important forum for the worldwide SEP holders and implementers because many telecommunications companies involved in standard setting have significant patent portfolios in China. This Note describes the current status of the FRAND jurisprudence in China. In doing so, this Note analyzes how Chinese courts responded to four key questions—(1) Is the patent owner's failure to license fairly a breach of contract? (2) Does agreeing to license on FRAND terms waive the right to injunctive relief? (3) How should courts decide whether the proffered license is fair and reasonable? and (4) Is a SEP holder obligated to license its SEP to any willing license seeker?—and compares the answers with those provided by courts in the United States and Europe.

I. INTRODUCTION

Technical standards have become ubiquitous in contemporary life. For example, modern laptop computers and smartphones contain hundreds of components that comply with hundreds of standards.[1] Standard-setting organizations ("SSOs") are industry- or government-organized groups that develop technical standards, including incorporation of relevant patents.[2] Consequently, patents that cover the selected standards and have been adopted by the SSOs are considered standard-essential patents ("SEPs").[3] In the telecommunications industry, the most important

1. Richard H. Stern, Who Should Own the Benefits of Standardization and the Value IT Creates?, 19 MINN. J.L. SCI. & TECH. 107, 167–68 (2018).

2. Jonathan D. Putnam, Economic Determinations in "FRAND Rate"-Setting: A Guide for the Perplexed, 41 FORDHAM INT'L L.J. 953, 958 (2018).

3. Elizabeth D. Lauzon, Annotation, *Standard-Essential Patent Licensing on "Fair, Reasonable, and Nondiscriminatory" (FRAND) Terms*, 16 A.L.R. Fed. 3d Art. 5 (2016). As a side note, patent pools are different from SEPs and "are collections of

SSOs include the European Telecommunication Standards Institute ("ETSI"), and, in the United States, the Institute of Electrical and Electronics Engineers ("IEEE"), the Telecommunications Industry Association ("TIA"), and the Alliance for Telecommunications Industry Solutions ("ATIS").[4] Other countries such as China, Korea, Japan, and India also have their own national SSOs.[5] Since the emergence of third generation ("3G") cellular communication standards, various SSOs have collaborated to form global standardization, including the Third Generation Partnership Project ("3GPP") and the Third Generation Partnership Project 2 ("3GPP2").[6] Because of the large number of patents that may cover a given standard, SSOs permit participants to disclose which of their patents may be SEPs without necessarily determining whether the patents are actually essential to the standard.[7]

Standardization creates many benefits for both consumers and industries using these standards, such as interoperability of standardized products, transparency concerning SEPs, lower manufacturing costs, and non-discriminatory licensing terms.[8] Standardization also permits SEP holders to reap certain benefits at the expense of market competitors and standard implementers in many ways, including increased royalty payments on the relevant patents, exclusionary and anticompetitive benefits derived from clearing the market of rival technologies, increased sales volume, first-mover and head-start advantages, more valuable patent portfolios, and sunk-cost hold-up value (i.e., the cost to a SEP implementer to change the technology it uses).[9] A SEP holder has a particular advantage in negotiating licensing terms after the implementer has already invested heavily in implementing a given technology.[10] The problem of a SEP holder demanding a high royalty rate using the standard-development leverage is referred to as "hold-up."[11] Conversely, "hold-out" or "reverse hold-up" occurs

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two or more SEP owners that package and license their SEPs collectively." Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1043 (9th Cir. 2015).

4. Stern, *supra* note 1, at 130.

5. Unwired Planet Int'l Ltd. v. Huawei Techs. Co. (*Unwired Planet II*), [2018] EWCA (Civ) 2344, [23] (appeal taken from Eng.).

6. FTC v. Qualcomm Inc., No. 17–CV–00220–LHK, 2018 WL 5848999, at *2 (N.D. Cal. Nov. 6, 2018).

7. Stern, *supra* note 1, at 130.

8. Putnam, *supra* note 2, at 961.

9. Stern, *supra* note 1, at 117–22.

10. Putnam, *supra* note 2, at 962. The English Court of Appeal in *Unwired Planet II*, [2018] EWCA (Civ) 2344, [216] (appeal taken from Eng.), even ruled that the SEP owner has 100% market share for the licensing of that SEP, thus having a dominant position in the market.

11. Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1031 (9th Cir. 2015).

if an implementer deliberately delays licensing negotiations to avoid paying royalties.[12]

To balance both SEP holders' and implementers' interests and to mitigate the hold-up and hold-out problems, SSOs now routinely require each participant (either member or non-member) in the standardization process to agree to license its SEP to an implementer on "fair, reasonable, and non-discriminatory" ("FRAND") or "reasonable and non-discriminatory" ("RAND") terms.[13] The FRAND obligation does not create any separate intellectual property ("IP") rights; instead, it functions as an "encumbrance" on the extent to which SEP owners can enforce their IP rights.[14]

In recent years, disputes concerning FRAND-encumbered patents have arisen frequently around the globe. This is particularly true for the telecommunications industry because of the industry's fast development and requirement of a high degree of interoperability, its international footprint, and its significant reliance on patent protection, as well as the great market value of the SEPs involved.[15] Although SEP holders and implementers often

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12. Jorges L. Contreras, *Global Markets, Competition, and FRAND Royalties: The Many Implications of* Unwired Planet v. Huawei, ANTITRUST SOURCE, Aug. 2017, at 47, 51.

13. Putnam, *supra* note 2, at 964; Stern, *supra* note 1, at 130; *see, e.g.*, European Telecomms. Standards Inst., *ETSI Intellectual Property Rights Policy*, ETSI RULES OF PROCEDURE, Dec. 4, 2019, at 39, art. 6.1, https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf [https://perma.cc/U8V7-CGKK] ("[T]he 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."); Int'l Telecomm. Union, *Common Patent Policy for ITU-T/ITU-R/ISO/IEC*, INT'L TELECOMM. UNION, https://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx [https://perma.cc/3UFG-P5DW] (last visited Apr. 25, 2020) (allowing the patent holder to license for free or on FRAND terms); Inst. Elec. and Elecs. Eng'rs Standards Ass'n, *IEEE-SA Standards Board Bylaws*, INST. ELECTRICAL AND ELECTRONICS ENGINEERS STANDARDS ASS'N, at sec. 6, https://standards.ieee.org/about/policies/bylaws/sect6-7.html [https://perma.cc/7LQH-ZUTJ] (last visited Apr. 25, 2020).

14. *See, e.g.*, TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15–2370 JVS(DFMx), 2018 WL 4488286, at *6 (C.D. Cal. Sep. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019) ("ETSI does not grant rights to IPR, and the FRAND obligation is not a supranational patent. Instead, the FRAND undertaking is to be expressly interpreted as an encumbrance on the IPR."); Andrew C. Michaels, *Patent Transfer and the Bundle of Rights*, 83 BROOK. L. REV. 933, 935 (2018) ("Courts have developed and applied a test stating that aspects of the license agreement that relate to the 'actual use' of the patented invention are 'encumbrances' running with the patent.").

15. Spyros Makris, The European Commission's Communication on Standard Essential Patents: A Step Forward Towards the Digital Single Market and the Internet of Things?, 10 GEO. MASON J. INT'L COM. L. 1 (2019); see Cody M. Akins, Overdeclaration of Standard-Essential Patents, 98 TEX. L. REV. 579, 579–80 (2020).

successfully negotiate a licensing agreement for a specific SEP or set of SEPs, they fail in many cases and have to resort to courts to resolve their disputes concerning FRAND royalty rates and the parties' rights and obligations.[16] Among the global jurisdictions, the United States and Europe, particularly Germany and the UK, are often favored by the parties, initially because the SEPs or SSOs involved were subject to their jurisdiction, and more recently because of the expertise and the more developed jurisprudence of the courts there.[17] China meanwhile has emerged as another important forum for the worldwide SEP holders and implementers. For example, it is now the largest smartphone manufacturer and exporter in the world.[18] In addition, many telecommunications companies involved in standard setting have significant patent portfolios in China. Since the landmark *Huawei v. IDC* decision in 2013, in which the Chinese court set a royalty rate for the parties, two subsequent SEP decisions warrant detailed analysis to understand the Chinese courts' approach to resolving FRAND-encumbered SEP disputes.

This Note describes the current status of the FRAND jurisprudence in China that the three seminal cases—*Huawei v. IDC*, *IWNComm v. Sony*, and *Huawei v. Samsung*—have established. In doing so, this Note analyzes how Chinese courts responded to four key questions and compares the Chinese courts' answers with those provided by courts in the United States and Europe. Part I provides a brief background of the Chinese legal system and relevant statutes and judicial guidelines and interpretations. Part II describes the three cases, including the background, the parties and issues involved, and the results. Part III discusses how the courts have answered or will answer the following questions using a comparative analysis: (1) Is the patent owner's failure to license fairly a breach of contract? (2) Does agreeing to license on FRAND terms waive the right to injunctive relief? (3) How should courts decide whether the proffered license is fair and reasonable? and (4) Is a SEP holder obligated to license its SEP to any willing license seeker? Part IV summarizes the answers to the above questions and draws some normative conclusions in comparison to the United States and Europe.

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16. *See, e.g.*, *Microsoft*, 795 F.3d at 1024; Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201 (Fed. Cir. 2014); Apple Inc. v. Motorola, Inc., 757 F.3d 1286 (Fed. Cir. 2014).

17. *See, e.g.*, *TCL*, 2018 WL 4488286; Case C-170/13, Huawei Techs. Co. v. ZTE Corp., http://curia.europa.eu/juris/document/document.jsf?text=&docid=159827&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=7381832 (July 16, 2015).

18. *See, e.g.*, Mohammad Imran, *Smartphone Manufacturing in China*, NOLASIA, https://nolasia.net/smartphone-manufacturing-in-china [https://perma.cc/MXM5-JQTN] (last visited Apr. 25, 2020).

II. UNDERSTANDING THE RELEVANT CHINESE STATUTES AND REGULATIONS

Seen as an instrument to legitimize the state and to accomplish a political agenda for the Communist Party, courts in China are known for their lack of political freedom and judicial independence.[19] In a comparative context, while laws on the books are usually influenced by Western legal systems, Chinese courts are reluctant to strictly follow the foreign models and in many ways instead resemble other authoritarian systems.[20] As a result, while the courts can be very innovative and tend to adopt a flexible approach, this is usually for the purposes of insulating courts and judges from criticism and yielding to public opinion and populist forces.[21]

China's patent system has undergone rapid development in the last fifteen years to improve the protection of IP rights, now making China a key jurisdiction for a patent owner's enforcement strategy.[22] In 2014, the Supreme People's Court ("SPC"), the highest court in China, established three specialized IP courts in Beijing, Shanghai, and Guangzhou, to act as first-instance courts for patent litigation from these municipalities/provinces.[23] The Beijing IP Court ("BIPC") also has exclusive appellate jurisdiction over the administrative decisions by the State Intellectual Property Office ("SIPO"), including the grant and confirmation of patents.[24] Effective January 1, 2019, an appellate-level IP tribunal within the SPC ("SPC IP Tribunal") handles all IP appeals from first-instance decisions.[25] This new SPC IP Tribunal centralizes jurisdiction over

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19. Yahong Li, *Introduction—Patents, Innovation and "One Country, Two Patent Systems"*, *in* PATENTS AND INNOVATION IN MAINLAND CHINA AND HONG KONG - TWO SYSTEMS IN ONE COUNTRY COMPARED 25 (Yahong Li ed., 2017); Benjamin L. Liebman, *Legal Reform: China's Law-Stability Paradox*, DÆDALUS—J. AM. ACADEMY ARTS & SCI., Spring 2014, at 96, 106.

20. Liebman, *supra* note 19, at 106; Weitseng Chen, *Introduction - Debating the Consensuses*, *in* THE BEIJING CONSENSUS? HOW CHINA HAS CHANGED WESTERN IDEAS OF LAW AND ECONOMIC DEVELOPMENT 1, 9 (Weitseng Chen ed., 2017).

21. Liebman, *supra* note 19, at 100–01.

22. Michael T. Renaud et al., *Patent Monetisation During World War FRAND*, IAM-MEDIA, Sep./Oct. 2018, at 59, 62, https://www.mintz.com/sites/default/files/media/documents/2018-10-08/Patent%20monetization%20during%20World%20War%20FRAND.pdf [https://perma.cc/PGJ2-WE7F].

23. Andrew Liu, *Patent Litigation in China: Overview*, THOMSON REUTERS PRACTICAL LAW, https://global.practicallaw.com/patentlitigation-guide (follow "China" hyperlink) (last visited Mar. 15, 2020). Beijing and Shanghai are municipalities under the direct administration of central government. *Direct-Administered Municipalities of China*, WIKIPEDIA, https://en.wikipedia.org/wiki/Direct-administered_municipalities_of_China [https://perma.cc/TSN7-JRQV] (last visited Apr. 25, 2020).

24. Liu, *supra* note 23.

25. Zhenhua Ni, *China Established a Centralized IP Appellate Tribunal*, CHINA L. INSIGHT (Jan. 15, 2019), https://www.chinalawinsight.com/2019/01/articles/

the patent and antitrust IP appeals and increases the uniformity of judicial decision-making across China and thereby the predictability of judicial outcomes.[26]

The following sections outline the statutes and judicial interpretations and guidelines that are relevant to resolving SEP disputes in Chinese courts.

A. Patent Law

The Patent Law of the People's Republic of China ("Patent Law") went into effect on April 1, 1985 and was drafted based on Western patent laws.[27] The Patent Law has subsequently gone through three amendments, the most recent of which was ratified in 2009.[28] The current Patent Law does not contain specific provisions on SEPs, although some provisions may be relevant to the discussions below.[29] For example, the Patent Law permits a patentee to seek preliminary injunctions, injunctions, and compensatory damages against a patent infringer.[30] To invalidate a patent, one petitions the Patent Re-examination Board ("PRB") of SIPO,[31] and the PRB's decision can be appealed to a People's Court.[32] In 2014, SIPO prepared a draft of the Fourth Amendment to the Patent Law and, in 2015, reported to the State Council of China.[33] In December 2018, the State Council approved the draft amendment, which would be submitted to the Standing Committee of the National People's Congress to become law.[34] According to the latest released

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ip-2/china-established-a-centralized-ip-appellate-tribunal/#page=1 [https://perma.cc/ZH7W-992H].

26. Its role is similar to the Court of Appeals for the Federal Circuit in the United States, upon which the SPC IP Tribunal is loosely modeled. *See id.*

27. Li, *supra* note 19, at 4–5. Contrary to the perception of domestic protectionism, China has become a reasonable and fair place to resolve patent disputes. *Id.* at 15 ("Research shows that foreign companies filed 10 percent of the patent lawsuits in China and won 70 percent of the actions.").

28. *Id.* at 4–6.

29. *See generally* Zhonghua Renmin Gongheguo Zhuanli Fa (中华人民共和国专利法) [Patent Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 27, 2008, effective Apr. 1, 1985) [hereinafter Patent Law], http://english.sipo.gov.cn/laws/lawsregulations/201101/t20110119_566244.html.

30. *Id.* arts. 60, 65 & 66.

31. *Id.* art. 45.

32. *Id.* art. 46.

33. *Amended Patent Law Draft to Be Submitted for NPC Deliberation in 2018*, CHINA INTELL. PROP. NEWS, Mar. 21, 2018, at 1, http://english.sipo.gov.cn/docs/2018-03/20180321093120232408.pdf.

34. *China: Updates on the Coming Amendments to the Patent Law*, AFD CHINA INTELL. PROP. L. OFF. (Dec. 20, 2018), http://www.mondaq.com/china/x/766794/Patent/Updates+On+The+Coming+Amendments+To+The+Patent+Law.

draft, it is expected to include a new provision introducing the "principle of good faith" in patent prosecution and enforcement.[35]

B. Anti-Monopoly Law ("AML")

FRAND-encumbered SEPs are special in the sense that their enforcement may stand right at the center of the IP-antitrust intersection.[36] The AML of China was enacted in 2008 for the purposes of promoting and protecting competition. Three government agencies were commissioned to enforce the AML: the Ministry of Commerce ("MOFCOM"), the National Development and Reform Commission ("NDRC"), and the State Administration for Industry and Commerce ("SAIC").[37] Additionally, the State Council established the Anti-Monopoly Commission ("AMC") to organize, coordinate, and guide anti-monopoly work.[38] Article 55 of the AML deals with IP rights, and the four agencies have published numerous draft enforcement guides on IP-related antitrust issues, including provisions specific to SEPs.[39]

C. Standardization Law

The Standardization Law of the People's Republic of China, promulgated in 1989, was revised in 2017 and came into force on January 1, 2018. The most relevant clause is Article 2, which reads: "Standards include national standards, industry standards, local

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35. *See, e.g.*, *China: Draft Amendments to Patent Law Released for Comment*, E.P.O. https://www.epo.org/searching-for-patents/helpful-resources/asian/asia-updates/2019/20190108.html (last visited Mar. 15, 2020). Although the initial draft contained a provision directed at SEPs, this provision disappeared from the latest draft. *See, e.g.*, Steve Song, *Highlights of the Draft Amendment of China's Patent Law*, LEE AND LI (Jan. 28. 2016), http://www.leeandli.com/EN/Newsletters/5566.htm [https://perma.cc/YAT5-8F38].

36. Daryl Lim, *Intellectual Property and Antitrust: Practical Insights*, 13 No. 1 IN-HOUSE DEF. Q. 7 (Winter 2018).

37. Yong Huang & Richean Zhiyan Li, *An Overview of Chinese Competition Policy: Between Fragmentation and Consolidation*, *in* CHINA'S ANTI-MONOPOLY LAW - THE FIRST FIVE YEARS 3, 6 (Adrian Emch & David Stallibrass eds., 2013), https://www.americanbar.org/content/dam/aba/events/international_law/2013/09/china_inside_andout/ChinasAMLaw_FirstFiveYears.pdf [https://perma.cc/D3KK-T6YH]. A new administration, the State Administration for Market Regulation ("SAMR"), was established in March 2018, to oversee all anti-monopoly matters. Hugo Butcher Piat, *China's New State Administration for Market Regulation*, CHINA BRIEFING (Oct. 11, 2018), https://www.china-briefing.com/news/chinas-new-state-administration-market-regulator-samr [https://perma.cc/PVX7-FHRX]. As a result, the MOFCOM and NDRC were merged into the SAMR, whereas the SAIC was abolished.

38. Huang & Li, *supra* note 37, at 6 (internal quotation marks omitted).

39. D. Daniel Sokol & Wentong Zheng, *FRAND in China*, 22 TEX. INTELL. PROP. L.J. 71, 77 (2013).

standards, group standards, and enterprise standards. National standards are classified into mandatory standards and recommended standards. Industry standards and local standards are recommended standards."[40] Further, Article 10 specifies that "[m]andatory national standards shall be developed for technical requirements that protect human health and life and property safety, that maintain national security and environmental safety, and that meet the basic needs of economic and social administration." And pursuant to Article 11, "[r]ecommended national standards may be developed for technical requirements that meet the needs of basic universal application, support of mandatory national standards, and guidance of relevant industries."[41] The distinctions between mandatory and recommended standards are pertinent where the laws or guidelines treat the two standards differently.

D. Judicial Interpretations and Guidelines

Although lacking power to make law, courts in China can issue judicial interpretations and guidelines to concretize rules or to change the scope or meaning of the rules.[42] These judicial interpretations and guidelines, however, have recently evolved into a case law system that effectively expands the judiciary's lawmaking power and creates legal doctrines and frameworks.[43] A number of judicial interpretations and guidelines have come out recently to clarify issues regarding SEP cases. On March 21, 2016, SPC published Judicial Interpretation II on "Several Issues Concerning the Application of Law in the Trial of Patent Infringement Dispute Cases" ("SPC Interpretation II") in response to "difficulties in producing evidence and low damages amounts" in patent cases.[44]

Less than a month after the BIPC's *IWNComm v. Sony* decision in March 2017, Beijing High People's Court ("BHPC") issued the new "Guidelines for Patent Infringement Determination

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40. Zhonghua Renmin Gongheguo Biaozhunhua Fa (中华人民共和国标准化法) [Standardization Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Nov. 4, 2017, effective Jan. 1, 2018), http://en.pkulaw.cn/display.aspx?cgid=304266&lib=law.

41. Id.

42. Chenguang Wang, Law-Making Functions of the Chinese Courts: Judicial Activism in a Country of Rapid Social Changes, 4 FRONTIERS L. CHINA 524, 526–27 (2006).

43. See, e.g., Mo Zhang, Pushing the Envelope: Application of Guiding Cases in Chinese Courts and Development of Case Law in China, 26 WASH. INT'L L.J. 269 (2017).

44. *See* Gary B. Zhang, *China: Judicial Interpretation II of the Supreme People's Court Regarding Patent Infringement Cases*, MONDAQ (May 11, 2016), http://www.mondaq.com/china/x/490126/Patent/Judicial+Interpretation+Ii+Of+The+Supreme+Peoples+Court+Regarding+Patent+Infringement+Cases [https://perma.cc/WY8P-L95B].

(2017)" ("BHPC Guideline"), wherein Articles 149–153 specially address whether and when a Beijing court may grant injunctive relief to a SEP holder.[45] Similarly, three months after the *Huawei v. Samsung* decision made by Shenzhen Intermediate People's Court ("SIPC") in January 2018, Guangdong High People's Court ("GHPC") published "Working Guideline on the Trial of Standard Essential Patent Dispute Cases (for Trial Implementation)" ("GHPC Guideline").[46] The most comprehensive guideline for SEP-related disputes in China thus far, the GHPC Guideline outlines, among other matters, the conditions for issuing injunctive relief and methods and factors for determining a FRAND rate.[47] It is binding on two major first-instance IP courts/tribunals—the Guangzhou IP Court and Shenzhen IP Tribunal within SIPC—as well as the second-instance court GHPC in Guangdong province.[48] Nevertheless, with the inauguration of the new SPC IP Tribunal, the application of the BHPC and GHPC Guidelines may be limited.[49]

III. SEP DISPUTES IN CHINA

Courts in China have settled at least four SEP cases so far, including *Huawei v. IDC*, *IWNComm v. Sony*, *Huawei v. Samsung*, and *Huawei v. Conversant*. Each of the first three cases answers specific questions about FRAND-encumbered SEPs, which altogether help construct the legal FRAND framework in China, while the last one is included for completeness. This part describes the background, main legal issues, and result of each of the four cases in chronological order.

A. *Huawei v. IDC: The Groundbreaking SEP Case in China*

45. Zhuanli Qinquan Panding Zhinan (2017) (专利侵权判定指南(2017)) [Guidelines for Patent Infringement Determination (2017)] (promulgated by Beijing High People's Ct., Apr. 20, 2017) [hereinafter BHPC Guidelines], http://bjgy.chinacourt.gov.cn/article/detail/2017/04/id/2825592.shtml [https://perma.cc/44DA-HHXD].

46. Guanyu Shenli Biaozhun Biyao Zhuanli Jiufen Anjian de Gongzuo Zhiyin (Shixing) (关于审理标准必要专利纠纷案件的工作指引(试行)) [Working Guideline on the Trial of Standard Essential Patent Dispute Cases (for Trial Implementation)] (promulgated by Guangdong High People's Ct., Apr. 26, 2018) [hereinafter GHPC Guideline] (on file with the author).

47. *Id.*; *see* King & Wood Mallesons, *Guangdong High People's Court Issued a Guideline for Trial of SEP Disputes*, CHINA L. INSIGHT (May 23, 2018), https://www.chinalawinsight.com/2018/05/articles/intellectual-property/guangdong-high-peoples-court-issued-a-guideline-for-trial-of-sep-disputes [https://perma.cc/FM93-P4UK].

48. King & Wood Mallesons, *supra* note 47.

49. *New Court Mulled for IP Appeals*, CHINA DAILY (Oct. 25, 2018), http://www.chinadaily.com.cn/cndy/2018-10/25/content_37133012.htm [https://perma.cc/PS4T-P33R].

Headquartered in Shenzhen, Guangdong Province, Huawei is one of the largest providers of information and communications technology infrastructure and smart devices in the world. It employs 180,000 people worldwide.[50] Huawei is also an innovation powerhouse: it is an active member of hundreds of standards organizations, industry alliances, and open source communities.[51] According to Huawei's own statistics, as of December 31, 2017, the company had been granted a total of 74,307 patents and filed 64,091 patent applications in China and 48,758 outside China; its patent portfolio was estimated to be worth more than $3.7 billion CNY.[52] Like many other multinational companies, Huawei is involved in many legal disputes, particularly IP disputes.[53]

Interdigital Corp. ("IDC"), on the other hand, is a much smaller player headquartered in the United States that derives its revenues primarily from patent licensing.[54] In 2010, IDC had approximately 260 employees and invested $70 million in research and development;[55] by 2017, the number of employees had grown to 350.[56] Nonetheless, IDC's patent portfolio is sizable: as of December 31, 2017, IDC owned approximately 19,000 patents and patent applications.[57]

In 2011 and 2012, IDC filed suit against Huawei, among other companies, for patent infringement in the U.S. District Court of Delaware and the U.S. International Trade Commission, seeking injunctions and exclusion orders, respectively.[58] Huawei retaliated in December 2011 by bringing two actions for violations of the AML

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50. *Corporate Introduction*, HUAWEI, https://www.huawei.com/us/about-huawei/corporate-information [https://perma.cc/B4LN-7YVN] (last visited Apr. 25, 2020).

51. Id.

52. HUAWEI, HUAWEI INVESTMENT & HOLDING CO., LTD. 2017 ANNUAL REPORT 49 (2017), https://www-file.huawei.com/-/media/corporate/pdf/annual-report/annual_report2017_en.pdf?la=en-us&source=corp_comm [https://perma.cc/J6PE-2RSE].

53. *Id.*; *Huawei*, WIKIPEDIA, https://en.wikipedia.org/wiki/Huawei [https://perma.cc/VU4X-G2F4] (last visited Apr. 25. 2020).

54. INTERDIGITAL, INTERDIGITAL, INC. 2017 ANNUAL REPORT 3 (2017) [hereinafter IDC 2017 ANNUAL REPORT], http://www.snl.com/interactive/newlookandfeel/4103938/2017AnnualReportandNoticeof2018ASMandProxy%20Statement.pdf [https://perma.cc/66HD-XWB6].

55. Jiaohu Shuzi Tongxin Youxian Gongsi (InterDigital Communications, Inc.) Su Huawei Jishu Youxian Gongsi (交互数字通信有限公司诉华为技术有限公司) [Huawei Techs. Co. v. InterDigital Commc'ns, Inc.], pkulaw.cn (Guangdong High People's Ct. Oct. 16, 2013) (China) [hereinafter *IDC*].

56. IDC 2017 ANNUAL REPORT, *supra* note 54, at 11.

57. *Id.* at 3.

58. Jyh-An Lee, *Implementing the FRAND Standard in China*, 19 VAND. J. ENT. & TECH. L. 37, 49 (2016).

and the FRAND obligations against IDC at SIPC in China.[59] In 2013, SIPC decided, and GHPC upheld on appeal, that IDC had violated its FRAND obligations; SIPC set the FRAND royalty rate to be 0.019% of the sales price of Huawei's wireless devices, a rate comparable to the agreement entered into in 2007 between IDC and Apple.[60] *Huawei v. IDC* (hereinafter *IDC*) became the first time a Chinese court spoke about how to interpret and enforce the FRAND commitments an SEP holder pledges to an SSO.

B. IWNComm v. Sony: the First SEP Case Granting an Injunction

The SEP involved in this case was IWNComm's Chinese patent entitled "Method for the Access of the Mobile Terminal to the WLAN and for the Data Communication via the Wireless Link Securely," Patent No. ZL02139508.X (ZL '508 patent).[61] In 2003, the WLAN Authentication and Privacy Infrastructure ("WAPI"), embodied in the ZL '508 patent, was adopted as a Chinese National Standard for Wireless LANs (GB 15629.11-2003).[62] Since then, before they can be sold in China, all phones have had to comply with the WAPI standard in order to obtain the telecommunications equipment and network access license issued by the Ministry of Industry and Information Technology.[63] The WAPI technology is thus effectively a "mandatory" standard in China.[64] In June 2015, after the licensing negotiations with Sony that started in March 2009 finally broke down in March 2015, IWNComm initiated a patent

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59. *Id.* Most recently in Jan. 2019, Huawei sued IDC again in the SIPC for failing to license IDC's 3G/4G/5G SEPs on FRAND terms to Huawei, and sought the court's determination of the licensing terms for all of IDC's 3G/4G/5G SEPs in China. INTERDIGITAL, INC., FORM 8-K, at 3 (Jan. 7, 2019), https://seekingalpha.com/filings/pdf/13143224.pdf [https://perma.cc/RRG6-RNKG].

60. *IDC*, *supra* note 55.

61. Press Release, IWNCOMM (Mar. 6, 2018) [hereinafter IWNComm Press Release], http://www.iwncomm.com/cn/ShowArticle.asp?ArticleID=730 [https://perma.cc/8C57-M699].

62. *Id.* During the standardization, IWNComm promised to "license this patent on reasonable and non-discriminatory terms and conditions," the first national SEP pledge in China. *Id.*

63. Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

64. Guanyang Yao, *Analysis on SEP Infringement Case* IWNComm v. Sony, LIU SHEN & ASSOCIATES (May 23, 2018), http://www.liu-shen.com/Content-2755.html [https://perma.cc/8NA7-X499]. But the WAPI has very few actual end users for its incompatibility with the 802.11 wireless networking standard. *Id.*; *Sony II*, *supra* note 63; *WLAN Authentication and Privacy Infrastructure*, WIKIPEDIA, https://en.wikipedia.org/wiki/WLAN_Authentication_and_Privacy_Infrastructure (last visited Jan. 19, 2019).

infringement action against Sony in BIPC.[65] In August 2015, Sony filed an invalidation petition to SIPO's PRB, which rejected Sony's petition.[66] In March 2017, BIPC, for the first time in China, granted injunctive relief for infringement of a SEP to the patentee after finding the implementer at more fault during negotiations (hereinafter *Sony I*).[67] A year later, BHPC affirmed the part of the ruling related to the injunction (hereinafter *Sony II*).[68]

Parallel to this case, IWNComm sued Apple Computer Trading (Shanghai) Co., Ltd. ("Apple Shanghai") in March 2016, in Shanxi High People's Court for infringing ZL '508 following the parties' unsuccessful licensing negotiations.[69] Like Sony, Apple Shanghai attempted to invalidate the patent in May 2016 but also failed. Apple then filed an administrative appeal on the patent validation decision. In October 2016, Apple Inc., Apple Shanghai, and Apple Electronics Products Commerce (Beijing) Co., Ltd. ("Apple Beijing"), together brought an action on their WAPI SEP royalty dispute in BIPC, requesting the court to conclude that the ZL '508 patent was a SEP and to determine the royalty rate. This request was turned down by BHPC in January 2018.[70]

C. Huawei v. Samsung: The Second Injunction-Granting SEP Case

On January 4, 2018, SIPC resolved another SEP dispute, again involving Huawei, and published the non-confidential version of the opinion in March 2018. This case concerned 2G, 3G, and 4G mobile communication standards and a bundle of SEPs that Huawei owned on these standards. Although Samsung initiated the licensing discussion, Huawei filed the lawsuit in 2017 at SIPC after approximately six years of unsuccessful negotiations with

65. IWNComm Press Release, *supra* note 61.

66. Id.

67. Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Su Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Qin (西安西电捷通无线网络通信股份有限公司诉索尼移动通信产品(中国)有限公司) [China IWNComm Co., Ltd. v. Sony Mobile Comm'ns (China) Co., Ltd.], http://www.iprdaily.cn/article_15883.html (Beijing IP Ct. Mar. 22, 2017) (China) [hereinafter *Sony I*].

68. *Sony II*, *supra* note 63 (reversing the lower court's ruling on Sony's contributory infringement).

69. IWNComm Press Release, *supra* note 61.

70. *Id.* Additionally, in December 2012, Apple filed an antitrust suit against IWNComm at BIPC. IWNComm's patent infringement suit and Apple's patent invalidation appeal and antitrust action were pending at the time of this writing. Besides the various pending lawsuits in China, Apple has sought arbitration at the Hong Kong International Arbitration Centre for a determination of a FRAND royalty rate, and IWNComm has sued Apple for violation of trade secrets protection by providing its licensing agreement with IWNComm to Sony. *Id.*

Samsung.[71] The dispute between Huawei and Samsung resulted from two major disagreements that caused the prolonged negotiation and the final break-up: (1) Samsung initially wanted to cross license both parties' patent portfolios (including both SEPs and non-SEPs), whereas Huawei wanted to include only SEPs; and (2) after the scope of the negotiation was narrowed down to SEPs, the parties could not agree on whether and how much Samsung should pay Huawei for Huawei's SEPs. Samsung insisted on paying no fees or a minimal royalty rate based on that set up in *IDC* by the same court (i.e., 0.019%). Huawei did not agree to such a low royalty rate and offered a much higher rate.[72] The parties subsequently initiated various patent infringement suits and patent invalidity proceedings in China and the United States against each other.

In this case, Huawei's claims were that Huawei did not violate the FRAND principle while Samsung did during their license negotiation, and that Samsung infringed Huawei's '715 patent (Patent No. 201110269715.3), a LTE SEP adopted into several 3GPP standards.[73] These 3GPP standards were in turn adopted by the Chinese telecommunications industry as recommended standards for 4G phones. More importantly, the three largest telecommunications operators in China—China Mobile, China Unicom, and China Telecom—all adopted at least one of these standards.[74] The court thus bifurcated the analysis into two issues: (1) which party was at more fault in FRAND negotiations? and (2) did Samsung infringe the '715 patent? The court ultimately ruled in favor of Huawei on both issues, employing a fault-balancing approach.[75] As a result, the court granted the injunction but encouraged the parties to continue their negotiation (hereinafter *Samsung*).[76]

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71. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*].

72. *Id.* Huawei's proposals were redacted, so the royalty rates were unavailable.

73. Id.

74. *Id.* These three state-run businesses dominate the telecommunications industry in China and all are mobile carriers. Among them, China Telecom and China Unicom are fixed-line operators with nationwide licenses. *Telecommunications Industry in China*, WIKIPEDIA, https://en.wikipedia.org/wiki/Telecommunications_industry_in_China [https://perma.cc/XJV2-788B] (last visited Apr. 25, 2019).

75. *Samsung*, *supra* note 71.

76. *Id.* In April 2018, the U.S. District Court in Northern District of California, in April 2018, ordered Huawei not to enforce SIPC's injunction orders, Huawei Techs. Co. v. Samsung Elecs. Co., No. 3:16–cv–02787–WHO, 2018 WL 1784065, at *12 (N.D. Cal. Apr. 13, 2018), which was vacated a year later as the two companies agreed to settle their 8-year long legal battle and drop

D. Huawei v. Conversant: Rate Setting for SEPs

In July 2017, Conversant, a non-practicing entity, sued Huawei and ZTE at the High Court of Justice in London, alleging infringement of Conversant's four UK patents and requesting the court to set the global FRAND rate for its global patent portfolio including three Chinese SEPs acquired from Nokia.[77] The English court later held for Conversant.[78] Soon thereafter, Huawei sought before the Nanjing Intermediate People's Court ("NIPC") in China a non-infringement declaration against Conversant and a determination of FRAND royalty rates for Conversant's Chinese SEPs, while initiating administrative proceedings to invalidate these SEPs.[79] NIPC handed down its first-instance judgment on September 16, 2019 (hereinafter *Conversant*).[80] By the time of this judgment, eight of Conversant's 15 Chinese SEPs had been invalidated in the administrative proceedings.[81] Of the remaining seven SEPs that NIPC analyzed, the court found only one to be essential to 4G technologies and set royalty rates to 0%, 0.00225%, and 0.0018% for Huawei's sale in China of single-model 2G or 3G mobile terminal products, single-model 4G mobile terminal products, and multi-model 2G/3G/4G mobile terminal products, respectively.[82] At the time of this writing, it is unclear whether Conversant has appealed NIPC's judgment, and Huawei and ZTE's challenge to the UK High Court's decision to exercise jurisdiction to determine the global FRAND rates is pending before the UK Supreme Court.[83]

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all lawsuits against each other. *See Huawei Techs. Co. v. Samsung Elecs. Co.*, No. 16–cv–02787–WHO, 2019 WL 3369748, at *1 (N.D. Cal. Mar. 21, 2019); Sijia Jiang & Rama Venkat, *Huawei, Samsung Agree to Settle Patent Dispute in U.S. Court*, REUTERS (Feb. 27, 2019, 4:02 AM), https://www.reuters.com/article/us-huawei-tech-samsung-elec-litigation/huawei-samsung-agree-to-settle-patent-dispute-in-u-s-court-idUSKCN1QG10Y [https://perma.cc/6MXD-Y9TB]; Jacob Kastrenakes, *Samsung and Huawei End Years-Long Patent Battle*, VERGE (May 16, 2019, 9:21 AM), https://www.theverge.com/2019/5/16/18627592/samsung-huawei-patent-battle-china-settlement [https://perma.cc/UBG2-VJ3T].

77. Sally Gao & Andrew White, *Chinese Court Judgment on SEP Royalty Dispute Between Huawei and Conversant*, MATHYS & SQUIRE (Nov. 6, 2019), https://www.mathys-squire.com/insights-and-events/news/chinese-court-judgment-on-sep-royalty-dispute-between-huawei-and-conversant/ [https://perma.cc/7DZX-F5C3].

78. Id.

79. *See id.*; Zhe Lu & Qishan Zhao, Huawei v. Conversant*: Setting the FRAND Rates for SEPs in Chinese Market*, LEXFIELD (Dec. 26, 2019), http://www.lexfieldlaw.com/?c=n&a=Publication_detail&myid=8&id=118 [https://perma.cc/L43D-KTTF].

80. Lu & Zhao, *supra* note 79.

81. Id.

82. Id.

83. *Id.* Like Huawei, ZTE requested SIPC to set FRAND rates for Conversant's Chinese SEPs. SIPC rejected Conversant's jurisdictional challenge,

IV. ANALYSIS OF THE CHINESE COURTS' APPROACH TO FRAND DISPUTES

A court faces a number of challenges in dealing with a FRAND dispute. To name a few, does a FRAND commitment create any obligation? If so, what kind of legal obligation? These are the inquiries courts have to address at the outset before turning to the substance. Also, how should a court determine whether a proffered license is compliant with the FRAND principle? Should a court grant injunctive relief to a SEP holder who pledges to license the SEP on FRAND terms? And can a SEP holder refuse to license its SEP? This part dissects the four opinions in an attempt to find answers to the above questions. Furthermore, this part describes the FRAND framework that Chinese courts have established and applied to the issues at hand.

A. Is a SEP Holder's Failure to License Fairly a Breach of Contract?

In the United States, courts find that a SEP holder's promise to an SSO constitutes a binding contract between the SEP holder and the SSO, and that a SEP implementer is a third-party beneficiary who can enforce the contract against the SEP holder.[84] Accordingly, the SEP implementer can sue the SEP holder for breach of contract if the SEP holder fails or refuses to license the patent on FRAND terms.[85]

In China, however, the *IDC* ruling by the Guangdong High People's Court ("GHPC") and the subsequent judicial guidelines have answered this question in the negative. First, the *IDC* court established the choice-of-law rule applicable to the FRAND undertaking. In this case, IDC alleged that French law should apply because IDC's patents were adopted by ETSI, an SSO established in France, and because the FRAND concept did not actually exist

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and Conversant has appealed this jurisdiction decision to the SPC IP Tribunal. *Id.*

84. *See, e.g.*, FTC v. Qualcomm Inc., No. 17–CV–00220–LHK, 2018 WL 5848999, at *15 (N.D. Cal. Nov. 6, 2018); TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15–2370 JVS(DFMx), 2018 WL 4488286, at *5 (C.D. Cal. Sep. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019); Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1031 (9th Cir. 2015); *In re* Innovatio IP Ventures, LLC Patent Litigation, 921 F.Supp.2d 903, 923 (N.D. Ill. 2013).

85. *See* U.S. DOJ and PTO, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments* (Jan. 8, 2013), https://www.justice.gov/atr/page/file/1118381/download. In December 2018, the U.S. DOJ, however, decided to withdraw from the joint statement. *See, e.g.*, Jorge Contreras, *Industry Weighs in on DOJ's Standards Essential Patent Policy Reversals*, INFOJUSTICE (Apr. 2, 2019), http://infojustice.org/archives/40992 [https:// perma.cc/9LL8-MX4E?type=image].

in Chinese law.[86] Pursuant to French law, IDC asserted, the fact that an IP owner unilaterally pledges to be ready to license on FRAND terms only indicates an invitation for license negotiation,[87] rather than a binding contractual relationship.[88] As a result, a court has no legal basis to deem that a contract exists before the parties reach an agreement.[89] Agreeing with the first-instance judgment issued by the Shenzhen Intermediate People's Court ("SIPC"), GHPC rejected IDC's proposition and held that Chinese law should apply to interpret the FRAND obligation,[90] a position different from that of many courts in foreign jurisdictions which have chosen to apply the law of the country where the SSO is established.[91] This choice-of-law ruling has been confirmed by the *Sony II* and *Samsung* cases and the GHPC guideline.[92]

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86. *IDC*, *supra* note 55.

87. In fact, courts and scholars are still not in full agreement as to whether under French law the FRAND obligation amounts to a contractual relationship between the various parties. The U.S. courts that choose to apply French law have deemed that a SEP implementer is a third-party beneficiary to the binding contract between the SEP owner and ETSI pursuant to the doctrine of *stipulation pour autrui* (or stipulation on behalf of a third party). *See, e.g.*, *TCL*, 2018 WL 4488286. Similarly, Justice Birss in *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.* (*Unwired Planet I*), [2017] EWHC 711 (Pat), [146] (Eng.), recognizing that "the enforceability of the FRAND undertaking in French law is not a clear cut question," reasoned that the doctrine of *stipulation pour autrui* can apply to the FRAND obligation to make it enforceable by third parties. On the other hand, other European courts, including those in Germany and Netherlands, as well as courts in Japan and Korea, have refused to recognize the FRAND undertaking as a binding agreement. *See, e.g.*, *IDC*, *supra* note 55 (referring to a German court's opinion); John Allen & Paul van Dongen, *Netherlands: Samsung and Apple: No Frands in the Netherlands*, MONDAQ (Nov. 1, 2011), https://www.mondaq.com/patent/151180/samsung-and-apple-no-frands-in-the-netherlands; Samsung v. Apple [Seoul CD. Ct], 2011Ga-Hap39552, Aug. 24, 2012 (S. Kor.), https://drive.google.com/file/d/0B1Qqijz4aI6hdW9xU3pGN2N6VDQ/view; Ryuichi Shitara, *IBA; Litigating Standard-Essential Patents in Japan*, https://www.ip.courts.go.jp/vc-files/ip/file/IBA.pdf (last visited May 21, 2020).

88. *IDC*, *supra* note 55.

89. *Id*.

90. *Id*.

91. *See TCL*, 2018 WL 4488286 (applying French law); *Unwired Planet I*, [2017] EWHC 711 (Pat), [146] (Eng.) (same); Tōkyō Chihō Saibansho [Tokyo Dist. Ct.] Feb. 28, 2013, 2011 (wa) 38969 (Japan) (same). *See also* Kaori Minami, Apple v Samsung, *or FRAND, Japanese-style*, IPKAT (Mar. 25, 2013), http://ipkitten.blogspot.com/2013/03/apple-v-samsung-or-frand-japanese-style.html [https://perma.cc/762L-3P5P].

92. *See* Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*]; Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v.

Second, the *IDC* decision implied that the FRAND undertaking did not constitute a contract under Chinese law. IDC attempted to convince the court to adopt the approach of the Mannheim Regional Court in Germany that had found no binding agreement between an SEP holder and a potential implementer and that German contract law did not recognize a contract having a third-party beneficiary.[93] The German court instead viewed the pledge an SEP holder made to an SSO as a mere invitation to third parties with no binding effect.[94] Huawei counterclaimed that IDC was obligated to license its SEPs on FRAND terms, whether such an obligation stemmed from any contractual relationship, the FRAND commitment to the SSOs, or the doctrine of fairness, honesty, and faithfulness. GHPC, without addressing the German approach, stated that as members of the ETSI and the TIA, both Huawei and IDC were bound by the IPR policies of both SSOs.[95] The decision, however, did not specify whether a contract was in place. It nevertheless recognized that the promise a SEP holder makes to an SSO has a binding effect upon the SEP holder. But does "binding" here mean that the SEP holder is obligated to make an invitation for license negotiation or, in other words, "*prepared to grant* irrevocable licenses," or that the SEP holder is obligated to *grant* a license on FRAND terms and conditions? The other possible theory is based on contract law with a potential implementer being a third-party beneficiary, a view widely adopted by U.S. courts.[96] Professor Jyh-An Lee argued that such an arrangement did not exist under Chinese law because Chinese contract law was influenced by

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Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*]; GHPC Guideline, *supra* note 46, art. 8 ("In the trial of cases concerning SEP disputes, a people's court shall consider applying the law of the location where protection is claimed or the law of the court, with respect to, among other issues, interpretation of the FRAND principle . . . .").

93. *IDC*, *supra* note 55.

94. *Id.* In this case, the Mannheim Regional Court granted Motorola an injunction against Microsoft. *See* Florian Mueller, *FRAND Abuse: German Court Hands Motorola an Injunction Against Windows 7 and Xbox 360*, FOSS PATENTS (May 2, 2012, 9:26 AM), http://www.fosspatents.com/2012/05/frand-abuse-german-court-hands-motorola.html [https://perma.cc/2QTC-S5X9].

95. According to the court, the ETSI IPR policy clearly defined FRAND in Article 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 . . . ." The TIA also had a similar IPR policy. In *Unwired Planet I*, [2017] EWHC 711 (Pat), [160], Justice Birss explained that Unwired Planet was bound by the IPR policies despite not being a member of ETSI.

96. *See, e.g.*, Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1031 (9th Cir. 2015); *In re* Innovatio IP Ventures, LLC Patent Litigation, 921 F.Supp.2d 903, 923 (N.D. Ill. 2013).

German civil law more than the common law, and German contract law rejects contracts having third-party beneficiaries.[97] But if German law has indeed been influential in FRAND disputes, why didn't the *IDC* court simply follow the German court's ruling that a SEP holder is not bound by its FRAND commitment?[98] Whatever the answers were to the above questions, the courts dodged this issue, implicitly rejecting both the contract theory and the invitation-to-negotiation theory to explain the FRAND undertaking. A third theory, as touched on by BIPC in *Sony I*, is that a FRAND undertaking is a "legal transaction" or "juristic act," which does not constitute a binding contract under China's Contract Law.[99] A "legal transaction" or "juristic act," a civil law notion prescribed in Article 134 of General Provisions of the Civil Law, "can be based on unilateral expression of intention."[100] The legal transaction theory might find support in Article 7 of the 2018 GHPC Guideline, which states that "[t]he IPR policies proposed by [SSOs] have a binding effect on activities of standardization engaged by their members, and can be used as a basis for the trial of cases concerning SEP disputes."[101] Above all, the essence of this inquiry is to give an implementer legal standing to sue a SEP holder for failing to license the SEP on FRAND terms.

Most significantly, the *IDC* court brought the concept of good faith to the FRAND obligation. Specifically, the court created a FRAND framework based on the doctrine of "good faith, honesty, and faithfulness" articulated in various articles of the General Principles of Civil Law and Contract Law.[102] As will be discussed

97. Lee, *supra* note 58, at 56.

98. GHPC completely omitted to address this German court's decision submitted by IDC. Regarding the meaning of FRAND under French law, GHPC merely referred to IDC's own statement that there lacked settled definition of FRAND in other countries. *IDC*, *supra* note 55.

99. Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Su Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Qin (西安西电捷通无线网络通信股份有限公司诉索尼移动通信产品(中国)有限公司) [China IWNComm Co., Ltd. v. Sony Mobile Comm'ns (China) Co., Ltd.], http://www.iprdaily.cn/article_15883.html (Beijing IP Ct. Mar. 22, 2017) (China) [hereinafter *Sony I*]; *see* Zhonghua Renmin Gongheguo Hetong Fa (中华人民共和国合同法) [Contract Law of the People's Republic of China] (promulgated by the Nat'l People's Cong., Mar. 15, 1999, effective Oct. 1, 1999) [hereinafter Contract Law], arts. 2, 12, 14, 15, CLI.1.21651(EN) (Lawinfochina).

100. Zhonghua Renmin Gongheguo Minfa Zongze (中华人民共和国民法总则) [General Provisions of the Civil Law of the People's Republic of China] (promulgated by the Nat'l People's Cong., Mar. 15, 2017, effective Oct. 1, 2017) [hereinafter Civil Law], art. 134, CLI.1.291593(EN) (Lawinfochina).

101. GHPC Guideline, *supra* note 46, art. 7.

102. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v.

later, whether the terms and conditions of the proffered license are FRAND is an important but not determinative factor in deciding whether the SEP holder has violated its FRAND obligation to act in good faith. In this case, the court found that IDC violated the FRAND principle in numerous ways: first, the proffered royalty rate by IDC was not a FRAND rate; second, IDC was engaged in bundling of both SEPs and non-SEPs; and third, IDC sued Huawei for patent infringement and sought an injunction, a tactic to pressure Huawei into accepting its non-FRAND terms and conditions.

To the author's knowledge, *IDC* was one of the first cases in the world to incorporate the good faith principle into the FRAND undertaking.[103] This innovative legal framework may, for example, have influenced the Court of Justice of the European Union ("CJEU"), which in its 2015 case, *Huawei Technologies Co. Ltd. v. ZTE* Corp., considered the good faith conduct of both parties.[104]

B. Does Agreeing to License on FRAND Terms Waive the Right to Injunctive Relief?

Although in general a patentee can seek injunctive relief for violations of its IP rights,[105] such a remedy has been granted to a

Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*]. Apparently, the doctrine of good faith, honesty, and faithfulness under Chinese law is not limited to a contractual relationship, whereas the doctrine of good faith and fair dealing under the common law is only relevant to the contract law. *See* Civil Law, *supra* note 100, art. 7 ("Civil subjects engaging in civil activities shall follow the principles of good faith, adhere to honesty, and keep their commitments."); Contract Law, *supra* note 99, art. 5 ("The parties shall observe the principle of fairness in defining each other's rights and obligations."); *Id.* art. 6 ("The parties shall observe the principle of good faith in exercising their rights and fulfilling their obligations."). *See also* Lee, *supra* note 58, at 56–57.

103. Although courts in other jurisdictions have found the FRAND declaration to oblige a party to negotiate in good faith. *See* sources cited *supra* note 87.

104. Case C-170/13, Huawei Techs. Co. v. ZTE Corp., http://curia.europa.eu/juris/document/document.jsf?text=&docid=159827&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=7381832 (July 16, 2015) ("Paragraph 242 of the German Civil Code . . . lays down that an obligor has a duty to perform the obligation in accordance with the requirements of good faith, with due regard for customary practice."); *see Negotiating Licenses for Essential Patents in Europe*, 4IP COUNCIL, https://caselaw.4ipcouncil.com/guidance-national-courts [https://perma.cc/X99M-DYET] (last visited Apr. 25, 2019).

105. *See, e.g.*, Patent Law, *supra* note 29, art. 60 ("If a dispute arises as a result of exploitation of a patent without permission of the patentee, [and if] the said department believes the infringement is established, it may order the infringer to cease the infringement immediately . . . ."); Zuigao Renmin Fayuan Guanyu Shenli Qinfan Zhuanli Quan Jiufen Anjian Yingyong Falu Ruogan Wenti de Jieshi (II) (最高人民法院关于审理侵犯专利权纠纷案件应用法律若干问题的

SEP holder only in limited situations and in specific jurisdictions.[106] In the United States, courts tend to view the FRAND undertaking as the SEP holder's implicit waiver of injunctive relief against a willing licensee, despite many companies, agencies, and scholars pressing for making this remedy available.[107] In China, courts have changed the answer from "yes" to "no" over the last decade.

In its 2008 judicial reply to the Hebei High People's Court's ("HHPC") request for a resolution to a patent infringement dispute involving a local standard,[108] the SPC suggested the following:

> [I]f a patent holder has participated in the making of a national, sector, or local standard or has consented to including its patents in a national, sector, or local standard, the patent holder will be deemed to have consented to allow others to use the patents for purposes of implementing the standard, and *those uses will not constitute patent infringement*. The patent

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解释(二)) [Interpretation (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases] (promulgated Sup. People's Ct., Mar. 21, 2016, effective Apr. 1, 2016) [hereinafter SPC Interpretations II], art. 26, CLI.3.266848(EN) (Lawinfochina).

106. *See Samsung*, *supra* note 102; Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

107. *See, e.g.*, FTC's Complaint for Equitable Relief at 16, FTC v. Qualcomm, Inc., No. 5:17–cv–00220, 2017 WL 242848 (N.D. Cal. Jan. 17, 2017); Sullivan & Cromwell LLP, *Garrard Beeney Records Animation on Licensing Standard-Essential Patents*, SULLIVAN & CROMWELL LLP [hereinafter *Beeney Video*], https://mailings.sullivanandcromwell.com/48/1108/landing-pages/video.asp?sid=654798f6-2542-435c-9f35-351ff11c58e1 (last visited Apr. 4, 2020).

108. Zuigao Renmin Fayuan Guanyu Zhaoyang Xing Nuo Gongsi Anzhao Jianshe Bu Banfa de Hangye Bioazhun "Fuhe Zaiti Hang Kuo Zhuang Sheji Guicheng" Sheji, Shigong Er Shishi Biaozhun Zhong Zhuanli de Xingwei Shifou Goucheng Qinfan Zhuanli Quan Wenti de Han (最高人民法院关于朝阳兴诺公司按照建设部颁发的行业标准《复合载体夯扩桩设计规程》设计、施工而实施标准中专利的行为是否构成侵犯专利权问题的函) [Letter of the Supreme People's Court on the Issue of Whether the Exploitation of a Patent in the Specification for the Design of Ram-compaction Piles with a Composite Bearing Base, an Industry Standard Issued by the Ministry of Construction, by Chaoyang Xingnuo Company Which Has Conducted Design and Construction according to the Standard Constitutes a Patent Infringement] (promulgated by the Sup. People's Ct., July 8, 2008, effective July 8, 2008) [hereinafter SPC Judicial Reply], CLI.3.110288(EN) (Lawinfochina).

> holder may ask users to pay a royalty fee, but the amount of the fee should be significantly lower than the normal amount.[109] (emphasis added)

Accordingly, HHPC, on appeal, struck out the patent infringement claim.[110] Similarly, in *IDC*, the court deemed that IDC's application for injunctive relief was for the purpose of forcing Huawei to accept its proposed royalties, which constituted a violation of FRAND principles and an abuse of market dominance prohibited by the AML.[111] Additionally, pursuant to a draft of the "Anti-Monopoly Guideline on Abuse of Intellectual Property Rights" released on December 31, 2015, a request for injunctive relief may subject a SEP holder to an antitrust investigation or litigation for excluding or restricting market competition if the SEP holder takes advantage of the injunctive relief to force a licensee to accept unfairly high royalties or other unreasonable licensing conditions.[112]

The judicial antagonism toward injunctive relief against SEP implementers, however, started diminishing in 2016. While the "Anti-Monopoly Enforcement Guidelines for the Abuse of Intellectual Property Rights (Draft Enforcement Guidelines)" issued by the State Administration for Industry and Commerce ("SAIC") in 2016 still prohibited abusing injunctive relief or litigation rights by a SEP holder to force the licensee to accept unreasonable transaction conditions,[113] in the same year, the SPC, in the SPC Interpretation II, disallowed a SEP implementer to assert this defense against a patent infringement claim if the standard in dispute is a recommended standard.[114] Subsequently, the Beijing IP Court

109. Sokol & Zheng, *supra* note 39, at 86.

110. *Id.* at 86–87.

111. *IDC*, *supra* note 55.

112. Anti-Monopoly Guideline on Abuse of Intellectual Property Rights (Exposure Draft) (promulgated by the Anti-Monopoly Commission of the State Council, Dec. 31, 2015) [hereinafter NDRC Anti-Monopoly Guideline], https://uschinatradewar.com/files/2016/01/IPR-Guideline-draft-20151231-EN.pdf, at § 3 (China).

113. Guanyu Lanyong Zhishi Chanquan de Fanlongduan Zhifa Zhinan (Guojia Gongshang Zongju Diqi Gao) (关于滥用知识产权的反垄断执法指南(国家工商总局第七稿)) [Anti-Monopoly Enforcement Guidelines for the Abuse of Intellectual Property Rights (Seventh Draft Enforcement Guidelines)] (promulgated by the St. Admin. for Industry & Com.) ST. COUNCIL GAZ., Feb. 4, 2016, at art. 14, http://www.gov.cn/xinwen/2016-02/04/content_5039315.htm (China).

114. SPC Interpretations II, *supra* note 105, art. 24 ("Where a recommended national, industrial or local standard clearly indicates the essential patent-related information, the people's court shall in general not side with the accused infringer

("BIPC") and SIPC in *Sony I* and *Samsung* granted injunctive relief to the respective SEP holders after finding that the respective implementers infringed the SEPs and were at obvious fault or more fault.

Sony I and *II* and *Samsung* expanded the FRAND framework established in *IDC* both procedurally and substantively with respect to the availability of injunctive relief. For all patents, before deciding on the patentee's request for an injunction, the court must determine (1) whether the patent at issue is valid if one party seeks to challenge the PRB's invalidity decision;[115] and (2) if the patent is valid or no one challenges the validity, whether the alleged infringing act or product falls within the scope of the patent.[116] While the validity analysis for SEPs is essentially the same as for ordinary patents, the infringement analysis is different because infringement is presumed if the patent is truly a SEP and the alleged infringing act or product is compliant with the standard embodied in the SEP, whereas for ordinary patents, the court has to conduct detailed comparison of the claim to the act or product in question.[117] In affirming BIPC's ruling for IWNComm, the Beijing High People's Court ("BHPC") first determined that the technology covered by claim 1 of the ZL '508 patent was the same as that of the national standard GB15620.11-2003/XG1-2006.[118] The court then concluded that Sony must have infringed ZL'508 because all phones were subject

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defending that the exploitation of such standard does not need consent of the patentee and thus does not infringe the patent.").

115. *See supra* notes 30 & 31 and accompanying text.

116. *See* Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*]; Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

117. *See* GHPC Guideline, *supra* note 46, art. 9:

> A standard essential patent infringement dispute can be determined by the following ways: (i) determining the specific content of the standard, and determining whether the patent in dispute is a standard essential patent; (ii) where there is evidence to prove that the accused infringing product complies with the standard to which the standard essential patent corresponds, making such a presumption that the accused infringing product falls into the scope of protection of the standard essential patent; (iii) if the accused infringer denies that the accused infringing product falls into the standard essential patent's scope of protection, it shall provide evidence for having not implemented the standard essential patent.

118. GB15620.11-2003/XG1-2006 amended part of the original standard, GB15620.11-2003. *Sony II*, *supra* note 116.

to the WAPI testing in China to get approval.[119] Similarly, in *Samsung*, SIPC held that the standards fell within the scope of several claims of the patent following detailed claim and technical analyses. Because the 3GPP standards at issue were effectively the industry standards and enterprise standards of the telecommunications industry in China, Samsung's phones must have practiced the claimed technology.[120]

The defenses available to an accused infringer to counter the patent infringement claim include the prior art defense, non-essentiality, "legitimate source," the doctrine of patent exhaustion, and mandatory national standard. An accused infringer can assert the prior art defense based on a prior art reference or the combination of a prior art reference and common knowledge.[121] In *Samsung*, SIPC found neither of the two technical articles submitted by Samsung to be common knowledge, and therefore found that Samsung's attempt to combine the two references was invalid for the purposes of the prior art defense.[122] The non-essentiality defense provides that the patented technology is not essential for implementing the standard, and thus that the above-discussed infringement presumption does not stand.[123] The "legitimate source" defense waives liability for an implementer if the implementer has obtained the accused products from a legitimate source, pursuant to Article 70 of the Patent Law.[124] Article 70,

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119. *Id.*

120. *Samsung*, *supra* note 116.

121. *See* Zuigao Renmin Fayuan Yinfa Guanyu Chongfen Fahui Zhishi Chanquan Shenpan Zhineng Zuoyong Tuidong Shehui Zhuyi Wenhua Dafazhan Dafanrong he Cujin Jingji Zizhu Xietiao Fazhan Ruogan Wenti de Yijian de Tongzhi (最高人民法院印发《关于充分发挥知识产权审判职能作用推动社会主义文化大发展大繁荣和促进经济自主协调发展若干问题的意见》的通知) [Opinion on Several Issues Relating to Sufficient Utilization of IP Adjudication to Foster Economic Development] (promulgated by the Sup. People's Ct., effective Dec. 16, 2011) SUP. PEOPLE'S CT. GAZ., at art. 14, http://gongbao.court.gov.cn/Details/90857967e518c766c368851b1b705a.html (China).

122. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*].

123. The *Samsung* case indicates that plaintiff (the patentee) has the initial burden of proof of essentiality, i.e., of proving that the standardized technologies fall within the scope of the claims at dispute. *Id.*

124. Patent Law, *supra* note 29, art. 70 ("Where any person, for the purpose of production and business operation, uses, offers to sell or sells a patent-infringing product without knowing that such product is produced and sold without permission of the patentee, he shall not be liable for compensation provided that the legitimate source of the product can be proved.").

however, as the *Samsung* court stipulated, applies to a retailer, not a manufacturer like Samsung. Furthermore, under the "patent exhaustion doctrine" established by Article 69 of the Patent Law, an implementer does not infringe a patent by using, offering to sell, selling, or importing a patented product "[a]fter [the] patented product or a product directly obtained by using the patented method is sold by the patentee or sold by any unit or individual with the permission of the patentee."[125] The *Samsung* court ruled that although Samsung used the CPU or chip manufactured by Qualcomm, the licensing agreement between Huawei and Qualcomm did not include any 4G/LTE SEPs and did not grant Qualcomm any pass-through rights.[126] In *Sony I* and *II*, Sony likewise contended that it used a WAPI testing device (i.e., IWNA2410) lawfully purchased from IWNComm and thus that the patent right was exhausted. But the court concluded that ZL '508 only covered WAPI testing methods and that the device was not a patented product or manufactured by a process embodied in ZL '508; therefore, it found that the patent exhaustion doctrine did not apply. Additionally, Sony argued that it used Qualcomm's chip and that Qualcomm obtained a license of ZL '508 from IWNComm. Qualcomm, however, denied that its licensing agreement with IWNComm included that patent.

The accused infringer can also assert non-infringement if the standard at issue is a mandatory national standard.[127] Sony tried to claim that the standard GB15620.11-2003 was in fact a mandatory national standard, and thus that implementing the ZL '508 patent did not constitute patent infringement. However, in 2004, General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China announced that mandatory implementation of this standard would be delayed.[128] The court thus held that the delay made this standard a recommended national standard and that pursuant to the SPC Interpretation II Article 24 Section 1, Sony could not use the SEP defense against IWNComm's patent infringement claim despite IWNComm's FRAND

125. *Id.* art. 69(1).

126. The U.S. Supreme Court has ruled that federal patent law preempts state contract law, but has left open the issue as to whether the same policy applies to contractual restrictions of patent rights, e.g., pass-through rights. *See* Stern, *supra* note 1, at 152–53.

127. SPC Judicial Reply, *supra* note 108; SPC Interpretation II, *supra* note 105, art. 24.

128. Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

commitment.[129] Nonetheless, the mandatory-national-standard defense can still entitle the patentee to compensation, albeit "significantly lower than the normal amount."[130]

Once infringement of a SEP is established, the court must then decide on the patentee's request for an injunction. As mentioned above, courts in China were reluctant to grant injunctive relief aiming to prevent the SEP holder from using the remedy to coerce the implementer to accept non-FRAND licensing terms and conditions. Meanwhile, concerns also arose that a complete bar of injunctive relief without any exception might engender gamesmanship by the SEP implementer to delay or avoid paying a license fee.[131] Finally in 2017, BIPC issued the first SEP-based injunction against Sony, which was affirmed on appeal.[132] SIPC followed suit and granted injunctive relief in favor of Huawei in March 2018.[133]

The two cases imposed the good faith requirement onto not only the SEP holders but also the implementers and made good faith a key component in assessing whether the SEP holder is entitled to injunctive relief. Specifically, both cases employed a fault-balancing approach to assess the good faith behaviors/faults of the parties during negotiations, and both cases made injunctive relief available on the condition that an implementer is at obvious fault and the SEP holder at no fault, or that the implementer is at more fault than the SEP holder in causing the break-up of the negotiation. In *Sony II*, BHPC made the following findings:

(1) Sony was aware of the patent and could have found out whether it implemented the patent;

(2) Although IWNComm agreed to provide a claim chart if the parties could sign a non-disclosure agreement, Sony refused to sign the agreement;

129. *Id.*

130. *See supra* note 99 and accompanying text.

131. *See* Keith Maskus & Stephen A. Merrill, Patent Challenges for Standard-Setting in the Global Economy: Lessons from Information and Communications Technology 97 (2013), https://www.nap.edu/read/18510/chapter/8#97.

132. Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Su Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Qin (西安西电捷通无线网络通信股份有限公司诉索尼移动通信产品(中国)有限公司) [China IWNComm Co., Ltd. v. Sony Mobile Comm'ns (China) Co., Ltd.], http://www.iprdaily.cn/article_15883.html (Beijing IP Ct. Mar. 22, 2017) (China) [hereinafter *Sony I*].

133. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*].

(3) Sony repeatedly denied its use of the patent during negotiations without any explanation or suggestion as to how to move the negotiations forward; and

(4) Even during the litigation, Sony failed to specify any acceptable royalty rate or to provide any security.

Accordingly, the court found that Sony used various delaying tactics to prolong the negotiation purposefully and was clearly at fault. The court, on the other hand, assigned no fault to IWNComm. As a result, BHPC affirmed the lower court's injunction against Sony and set the damages at three times the IWNComm-proffered royalty rate.[134]

In *Samsung*, SIPC concluded that Samsung was clearly at fault and violated the FRAND principle, whereas Huawei committed no obvious fault and did not violate the FRAND principle. In reaching this conclusion, the court focused on and weighed the faults committed by both parties during the negotiation phase:

(i) Samsung's insistence on bundling both SEPs and non-SEPs was the primary reason for delays in the SEP cross-license negotiation;[135]

(ii) Samsung deliberately delayed several licensing discussions;[136]

(iii) Unlike Huawei, Samsung was very passive in bringing up any meaningful license royalty offer;

(iv) Samsung rejected Huawei's arbitration proposal;[137] and

(v) Samsung used delaying tactics even during the court-ordered mediation.

On the contrary, the court found that Huawei had not committed a material fault, in spite of a minor fault for failing to provide a correct number of the LTE SEPs acquired from Sharp, which had been remedied later on.[138] The court also indicated that Samsung's proffered royalty rate showed its subjective bad faith, whereas Huawei's offer was reasonable and in good faith. As such,

134. Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

135. The court reasoned that according to the international custom for SEPs cross-license discussions, if one party does not want to license a bundle of both SEPs and non-SEPs, the other party should not insist on bundling. *Samsung*, *supra* note 133.

136. One reason Samsung gave for the delays in 2013 and 2014 was that the company was involved in multiple lawsuits with Apple, Ericsson and IDC. *Id.*

137. The *Sony II* court, however, rejected Sony's request for arbitration. IWNComm Press Release, *supra* note 61.

138. *Samsung*, *supra* note 133.

Huawei's offer complied with the FRAND principle, whereas Samsung's did not.

The subsequent BHPC and GHPC Guidelines respectively endorsed and outlined the courts' approaches for handling SEP disputes.[139] For example, Article 10 of the GHPC Guideline provides that "[i]f the SEP holder seeks injunctive relief against the standard essential patent asserted, a people's court shall judge the faults of the SEP holder and the implementer in accordance with the FRAND principle and relevant business practices, and thereby decide whether or not to issue an injunction."[140] Table 1 enumerates various circumstances of obvious faults by a SEP holder and an implementer, respectively, as specified by both Guidelines. When comparing the faults of the parties, courts should consider factors including "(1) overall negotiation process between the parties; (2) time, manner and content of the negotiation between the parties; [and] (3) reason for interruption or deadlock of the negotiation."[141] Obviously, if the SEP holder does not comply with its FRAND commitment and the implementer has no obvious faults, the court should not issue an injunction.[142] In the opposite situation, injunctive relief can be granted.[143] If both parties have no obvious fault and if the implementer has timely deposited a security, the court also should not issue an injunction against the SEP implementer.[144] Finally, if both parties have faults in the course of negotiation, courts should further assess "whether or not remedial measures have been taken, influence of the faults on the negotiation process, [and] the correlation between faults of the parties and failure of the negotiations" in its injunction determination.[145]

Table 1. Obvious faults conducted by a SEP holder and implementer, respectively.[146]

The SEP holder has obvious faults when conducting the following:[147]	The SEP implementer has obvious faults when conducting the following:[148]
(i) failing to issue a negotiating notice to the implementer, or having issued a negotiating notice but failing to specify the	(i) refusing to receive the negotiating notice from the SEP holder, or failing to explicitly respond within a

139. GHPC Guideline, *supra* note 46.
140. *Id.* art. 10.
141. *Id.* art. 11.
142. *Id.* art. 12(i).
143. *Id.* art. 12(ii).
144. *Id.* art. 12(iii).
145. *Id.* art. 12(iv).
146. *Id.* art. 13–14; BHPC Guideline, *supra* note 45, art. 152–153.
147. GHPC Guideline, *supra* note 46, art. 13.
148. *Id.* art. 14.

scope of involved patents in accordance with business practices and transaction practices; (ii) failing to provide the implementer with, among other information, a list of exemplary patents and claim charts in accordance with business practices and transaction practices, after the implementer explicitly expresses willingness to engage in the license negotiation; (iii) failing to propose concrete licensing conditions and a method for calculating the license royalty, or the proposed licensing conditions being clearly unreasonable, which results in failure to reach a license agreement; (iv) failing to respond within a reasonable time; (v) obstructing or interrupting the negotiation without due cause; and (vi) other conducts with obvious faults.	reasonable time after receiving the negotiating notice; (ii) refusing to make a confidentiality agreement without due cause, which results in failure or continuing the negotiation; (iii) failing to substantially respond within a reasonable time to, among other information, the list of exemplary patents and claim charts provided by the SEP holder; (iv) failing to substantially respond within a reasonable time after receiving conditions of license from the SEP holder; (v) proposing an apparently unreasonable condition, which results in failure to reach a license agreement; (vi) delaying or refusing to participate in the license negotiation without due cause; and (vii) other acts with obvious faults.

As such, the legal FRAND framework requires good faith conduct by both the SEP holder and implementer during SEP licensing negotiations and requires that the SEP holder offer its SEP on FRAND terms and conditions. Contrary to the *IDC* court's view, seeking an injunction against a willing licensee is no longer considered *per se* bad faith,[149] and the expanded FRAND framework allows injunctive relief on the grounds of patent infringement and greater fault on the side of the infringer/implementer. In addition to the fault analysis for deciding whether or not to issue an injunction, a court shall balance the benefits to the SEP holder, the implementer, and the public.[150] Still further, the *Samsung* court stated

149. Such an attempt may have consequences under antitrust laws in China and other countries though.

150. GHPC Guideline, *supra* note 46, art. 5. This provision might arguably make Chinese courts less likely to issue an injunction against a Chinese company to avoid negative impacts on the public.

that injunctive relief for SEPs would be different from that available to non-SEPs and allowed Huawei and Samsung to continue their SEPs negotiations before enforcing the injunction, without rewarding any compensatory damages to Huawei.[151]

The European courts have developed a similar framework, allowing injunctive relief and focusing on whether the parties' conduct and terms are compliant with the FRAND principle.[152] Specifically, a SEP owner is entitled to an injunction against an implementer that allegedly infringes the SEP only if (1) prior to bringing the injunctive action, the SEP owner has notified the implementer of the infringement; (2) in the event that the implementer has expressed its willingness to enter into a FRAND license, the SEP owner has presented to the implementer a specific, written offer specifying the royalty and how it is calculated; (3) the implementer has not diligently responded to the written offer; and (4) grant of the injunction would not abuse the SEP owner's dominant position.[153] Figure 1 below illustrates how this step-by-step approach works.[154] Therefore, under the circumstances where both parties are at fault, a court in China may still grant an injunction if the SEP implementer is at more fault than the SEP holder, whereas, in Europe, the SEP holder may not be able to obtain an injunction, which requires clean hands pursuant to *ZTE*.[155]

In the United States, courts are not inclined to grant an injunction and would rather determine reasonable royalties for the parties.[156] For example, the Ninth Circuit in *Microsoft v. Motorola*

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151. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*]. In contrast, the *Sony II* ruling is similar to a non-SEP infringement case, wherein the court granted treble damages to IWNComm for Sony's past willful infringement and an injunction against Sony for future infringing acts. Suoni Yidong Tongxin Chanpin (Zhongguo) Youxian Gongsi Su Xi'an Xi Dian Jie Tong Wuxian Wangluo Tongxin Gufen Youxian Gongsi Qin (索尼移动通信产品(中国)有限公司诉西安西电捷通无线网络通信股份有限公司) [Sony Mobile Comm'ns (China) Co., Ltd. v. China IWNComm Co., Ltd.], pkulaw.cn (Beijing High People's Ct. Mar. 28, 2018) (China) [hereinafter *Sony II*].

152. Case C-170/13, Huawei Techs. Co. v. ZTE Corp., http://curia.europa.eu/juris/document/document.jsf?text=&docid=159827&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=7381832 (July 16, 2015).

153. *Id.* ¶ 77.

154. Negotiating Licenses for Essential Patents in Europe, supra note 104.

155. Garry A. Gabison, A Two-Dimensional Approach to Nondiscriminatory Terms in FRAND Licensing Agreements, 24 B.U. J. SCI. & TECH. L. 100, 123 (2018).

156. *See* FTC's Complaint for Equitable Relief at 16, FTC v. Qualcomm, Inc., No. 5:17–cv–00220, 2017 WL 242848 (N.D. Cal. Jan. 17, 2017) ("Ordinarily, if a SEP holder and a potential licensee can neither agree on license terms nor agree to submit those terms to binding arbitration, the SEP holder

found that the SEP holder's motivation to bring an injunctive action could be to induce the implementer to pay a higher rate and thus indicative of bad faith, consonant with the *IDC* court's view.[157] Some scholars have attributed the courts' hesitation to grant injunctions to SEP holders to the Supreme Court's decision in *EBay Inc. v. MercExchange, L.L.C.,* holding that injunctive relief for patent infringement, as in other cases, also requires showing likelihood of irreparable injury, which can be difficult to prove for SEP holders.[158] Interestingly, in assessing the implementer's breach of contract claim, courts also focus on the parties' duties to negotiate in good faith and to offer a FRAND royalty rate,[159] the same factors considered by the behavioral FRAND framework established in China and Europe. For example, in *TCL Communication Technology Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, Judge Selna at the Central District Court of California found that, although Ericsson's proffered rates were not FRAND, they negotiated in good faith and thus did not breach the contract.[160]

In conclusion, the FRAND framework established by courts in Beijing and Guangdong imposes binding obligations on both parties in a FRAND-encumbered SEP licensing negotiation. The fault-balancing approach adopted by *Sony II* and *Samsung* is similar to the *ZTE* process set by CJEU and its successive decisions but is a more holistic approach. Furthermore, it gives the adjudicating court a lot of discretion in determining whether the parties behave in a manner compliant with the FRAND principle.

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initiates a patent-infringement suit in [] a court . . . and, if the court deems a patent valid and infringed, [it] determines and awards reasonable royalties.").

157. Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1049 (9th Cir. 2015) ("[A] patent-holder who signs such a sweeping promise as a RAND agreement at least arguably guarantees that the patent-holder will not take steps to keep would-be users from . . . seeking an injunction, but will instead proffer licenses consistent with the commitment made.") (citing Microsoft Corp. v. Motorola, Inc., 696 F.3d 872, 884 (9th Cir. 2012)) (internal quotation marks omitted); Sokol & Zheng, *supra* note 39, at 71.

158. 547 U.S. 388 (2006); *see* Stern, *supra* note 1, at 167.

159. *See, e.g.*, TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson No. CV 15–2370 JVS(DFMx), 2018 WL 4488286, at *50 (C.D. Cal. Sep. 14, 2018), *vacated in part, rev'd in part*, 943 F.3d 1360 (Fed. Cir. 2019); *Microsoft*, 795 F.3d at 1030.

160. *TCL*, 2018 WL 4488286, at *50. Similarly, the Ninth Circuit in *Microsoft*, 795 F.3d at 1047, agreed that the FRAND obligation does not mandate initial offers by a SEP holder to be on FRAND terms.

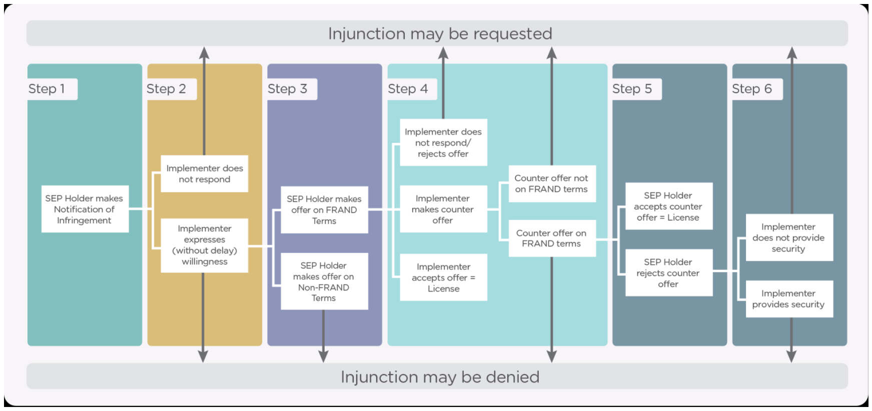

Figure 1. The *ZTE* process.

The change in the courts' attitude may be due, at least partially, to the hold-out problem, where implementers hold up the patentees by delaying to pay royalties or demanding a price that is "too low" *ex post*.[161] This problem has become serious in China.[162] For example, in *Sony* and *Samsung* cases, the negotiations lasted over five years, and Sony and Samsung offered royalties that IWNComm and Huawei, respectively, considered to be too low. One reason could be that Chinese courts have traditionally set royalty rates lower than other countries, especially the United States and Europe.[163] As an example, the *IDC* court set the rate to be only 0.019% for IDC's 2G-, 3G-, and 4G-SEPs. In contrast, the U.S. District Court in the Central District of California in *TCL* determined the rates for 2G-, 3G-, and 4G-SEPs owned by Ericsson to be 0.090%, 0.224%, and 0.314%, respectively for the rest of the world (including China), and set the rates even higher for the United States and Europe.[164] The implementers are thus motivated to delay the course of negotiation, expecting the SEP holder to sue them in court and the court to determine a royalty rate lower than what the US and European courts would decide. Consequently, courts have to make injunctive relief available to the SEP holders to police the

161. *See* Putnam, *supra* note 2, at 971–72.

162. *See, e.g.*, Yang Ming (楊明), *Biaozhun Biyao Zhuanli Xuke Zhong, Shui Zai Jiechi?* (*標準必要專利許可中，誰在劫持？*) [*Who is holding up in SEP licensing?*], IPR DAILY, http://www.iprdaily.cn/article_18247.html [https://perma.cc/84KG-BUPT] (last visited Apr. 25, 2020); Benjamin C. Li, *The Global Convergence of FRAND Licensing Practices: Towards "Interoperable" Legal Standards*, 31 BERKELEY TECH. L.J. 429 (2016).

163. *See, e.g.*, Kenneth R. Adamo, *Latest Views from the U.S. on FRAND Damages:* TCL v. LM Ericsson, KIRKLAND & ELLIS LLP (July 3, 2018), https://www.les-france.org/offres/doc_inline_src/758/Latest%2BViews%2BFrom%2Bthe%2BU.S.%2Bon%2BSEP_s%2B26%2BFrand%2BDamages_6-15-18_2854857382_429....pdf [https://perma.cc/GX9Z-5Z8M]. In *Unwired Planet I*, [2017] EWHC 711 (Pat), [467], Justice Birss simply cut the Major Market rate in half to arrive at a FRAND rate for China.

164. *TCL*, 2018 WL 4488286, at *52.

conduct of the implementers, while fearing that setting up higher FRAND rates would essentially overrule *IDC* and be objected to by many implementers in China.

C. How Should Courts Decide Whether the Proffered License Is Fair and Reasonable?

The *IDC* court ruled that whether the terms of the proffered license were compliant with the FRAND principle depended on the reasonableness of the royalty rate.[165] Put differently, a reasonable royalty rate would translate to "FRAND terms and conditions" that a SEP holder pledges to offer to an implementer. This view is shared by courts in the United States and Europe. But, of course, what constitutes a reasonable royalty rate remains controversial among the parties and different jurisdictions. The common methods of determining a FRAND rate include *ex ante*, comparable licenses, and "top-down" approaches. An "*ex ante* rate" is a rate the parties would have agreed on before the date on which the patented invention was adopted into an industry standard.[166] With the comparable licenses approach, courts simply use a rate accepted by two parties through consensual transactions, where the parties and patents are believed to be comparable to those involved in the instant dispute.[167] The top-down approach is a quantitative approach to calculate the royalty rate. Using handheld devices as an example, the top-down approach first calculates the royalty stack rate by multiplying the average handheld device price by the average percent of that value attributable to the standard. The royalty stack rate is then multiplied by the fraction of the number of the SEPs at issue divided by the total number of SEPs in that standard.[168] The top-down approach is applicable to portfolio licensing because it focuses on the comparative strength of a SEP holder's SEP portfolio for a certain standard.[169] The top-down approach also has the appeal of

165. *IDC*, *supra* note 55.

166. Anne Layne-Farrar & 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, 8 JINDAL GLOBAL L. REV. 127, 141 (2017); see Putnam, supra note 2, at 965.

167. *See Beeney Video*, *supra* note 107; Layne-Farrar & Wong-Ervin, *supra* note 166, at 156.

168. This total number of SEPs should be the number of truly essential patents, not the number of declared SEPs. *Beeney Video*, *supra* note 107. Note that in *In re Innovatio IP Ventures, LLC Patent Litigation*, 921 F.Supp.2d 903 (N.D. Ill. 2013), although Judge Holderman also used a top-down approach, an average profit of the component instead of the royalty stack rate was included in the formula.

169. Beeney Video, *supra* note 107.

preventing royalty stacking and hold-up by preventing SEP owners from charging a premium.[170]

1. Prior to *IDC*: *Ex Ante* Approach?

China's first attempt to regulate patents in the standardization process may have been SPC's 2003 draft interpretation concerning patent infringement disputes.[171] This judicial interpretation, however, was set aside due to the efforts to amend the Patent Law.[172] In 2004, the Standardization Administration ("SA") of China[173] released a draft regulation for public comment.[174] According to this draft, a patent owner whose patent is adopted by a national standard has to commit to licensing the patent for free or on a reasonable and non-discriminatory ("RAND") basis to a standard implementer.[175] This draft regulation was not implemented for failing to properly balance standardization and patent owners' rights.[176] SA's 2009 Draft Regulation II provided a patent owner with three options: license the patent to any entity and person (1) for free or (2) at a royalty rate significantly lower than a normal rate, on a RAND basis; or (3) does not agree to license as provided under (1) or (2).[177] But this draft regulation failed to

170. TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson No. CV 15–2370 JVS(DFMx), 2018 WL 4488286, at *7–*8 (C.D. Cal. Sep. 14, 2018), *vacated in part, rev'd in part*, 943 F.3d 1360 (Fed. Cir. 2019).

171. Zhou Shijun (周世骏), *Haoshi Duomo de Zhongguo Zhuanli Biaozhunhua Lifa* (*好事多磨的中国专利标准化立法*) [*Setbacks in the Standardization of Chinese Patents*], ZHEJIANG ZEDA L. FIRM (Apr. 3, 2011) [hereinafter Zeda News], http://www.zedalawyer.com/english/DesktopModule/BulletinMdl/BulContentView.aspx?BulID=703&ComName=default [https://perma.cc/LB9X-ZAUD] (China).

172. *Id.*

173. An agency under the General Administration of Quality Supervision, Inspection, & Quarantine (AQSIQ) of the State Council. *See SAC China – Membership: Member Body*, INT'L ORG. FOR STANDARDIZATION, https://www.iso.org/member/1635.html [https://perma.cc/5KGE-8UBE] (last visited Apr. 25, 2020).

174. Guojia Biaozhun Sheji Zhuanli de Guiding Zanxing (国家标准涉及专利的规定(暂行)) [Draft Regulation on Patents Involving National Standards] (promulgated by Standardization Admin. China, Mar. 19, 2004), https://www.jetro.go.jp/ext_images/world/asia/cn/ip/law/pdf/origin/opinion20040319.pdf [https://perma.cc/LQN2-C2J6].

175. *Id.* art. 11.

176. Zeda News, *supra* note 171.

177. Sokol & Zheng, *supra* note 39, at 83 (citing Sheji Zhuanli de Guojia Biaozhunzhi Xiuding Guanli Guiding Zhanxing Zhengqiu Yijuan Gao (涉及专利的国家标准制修订管理规定(暂行)(征求意见稿)) [Provisions on the Administration of Formulating and Revising National Standards Involving Patents (Interim) (Draft for Public Comments)] (promulgated by Standardization Admin. China, Nov. 2, 2009), at art. 9). This 2009 draft regulation was also not

explain the meaning of "significantly lower than a normal rate." Finally, in 2012, the agency released a third draft for comments, which deleted the "significant lower than a normal rate" language and replaced RAND with FRAND in the provision.[178] This change, among others, was retained in the "Preliminary Bulletin Regarding Administration Regulations for the National Standards Relating to Patents" jointly published by SA and SIPO in 2014.[179] Meanwhile, SAIC released its fifth draft on IP Enforcement Guide in August 2012, which provided that royalty fees for a patent embodying a mandatory national standard should not be significantly higher than the prevailing royalty fees prior to the patent's adoption into the standard.[180] This provision thereby set the royalty rates for patents adopted by mandatory national standards using the *ex ante* approach.[181] SAIC's draft regulation was silent as to the recommended standards. Combining these two 2012 draft regulations, the Chinese government might have contemplated that the *ex ante* approach would be applicable to mandatory national standards whereas recommended standards were to be licensed on a FRAND basis. One would generally expect a FRAND rate to be higher than an *ex ante* rate, as recommended standards are less regulated than mandatory standards (still the case today) and may be more likely to incorporate preexisting patents. Nevertheless, perhaps because no (truly) mandatory national standards have been involved in any court-adjudicated SEP disputes so far, or because an *ex ante* rate is largely a hypothetical rate influenced by many factors,[182] no court in China has tried to determine reasonable royalty rates using this methodology.

While the U.S. courts may be compelled to apply the *Georgia-Pacific* factors to determine an *ex ante* rate,[183] recently in *TCL*, the

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implemented after receiving many criticisms from patent-owning entities. Zeda News, *supra* note 171.

178. Sokol & Zheng, *supra* note 39, at 84.

179. Administration Regulations for the National Standards Relating to Patents, BULL. NAT'L STANDARDS ADMIN. COMMITTEE & ST. INTELL. PROP. OFF. CHINA (2013), art. 9, *translated in* Li Hongjiang, *Regulations on the Management of Patents Related to National Standards*, LI HONGJIAN BLOG (Jan. 6, 2014 1:14 PM), http://blog.sina.com.cn/s/blog_542ce8570101fdrl.html [https://perma.cc/YET5-Q5AA] [hereinafter Administration Regulations 2013].

180. Sokol & Zheng, *supra* note 39, at 85.

181. *Id.*

182. Layne-Farrar & Wong-Ervin, *supra* note 166, at 139–41.

183. Using this methodology, a court would consider many of the fifteen *Georgia-Pacific* factors to determine the reasonable royalty rate that a willing licensor and a willing licensee would arrive at in a "hypothetical negotiation" at the time of the infringement. *See* Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *aff'd*, 446 F.2d 295 (2d Cir. 1971); s*ee also* Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1041 (9th Cir. 2015). In the recently adopted IEEE 2015 Patent Policy, the IEEE included the

court "did not find useful a full-blown *Georgia-Pacific* analysis in the unique context of a FRAND dispute."[184] In Europe, Justice Birss in *Unwired Planet International Ltd. v. Huawei Technologies. Co*. (*Unwired Planet I*), [2017] EWHC 711 (Pat) (Eng.) outright rejected the *ex ante* valuation approach.[185]

2. *IDC*: Comparable Licenses Approach

With the legislation background discussed above, in 2013, SIPC for the first time set a FRAND rate for IDC's SEPs pertinent to recommended standards. SIPC proposed several factors for determining reasonableness of the proffered license fee: (1) profits from implementing this SEP or a similar patent and the weight of these profits in the overall profits; (2) the notion that the SEP holder should only gain from the novelty of the technology and not from any additional benefits resulted from the patent becoming an SEP; (3) the number of valid SEPs; and (4) how the royalty fees are distributed among the SEP holders. Accordingly, in calculating the FRAND rate, SIPC suggested factoring into the relationship between the royalty fees and product profits, the contribution of a SEP to the technology innovation, and the number and quality of SEPs, minus any potential costs for non-SEPs and other IPRs and benefits from the SEP adoption. GHPC on appeal agreed with these factors and further ruled that for the non-discriminatory requirement, a comparative method should be used if applicable: if two deals are similar, the license fee or license rate should be similar as well. This view was similar to that of the English Court of Appeal in *Unwired Planet International Ltd. v. Huawei Technologies Co.* (*Unwired Planet II*), [2018] EWCA (Civ) 2344 [23] (Eng.), which focused on the transactions themselves for the purposes of setting a royalty rate on reasonable and non-discriminatory terms.[186]

Sony I may be seen as another case using the comparable licenses approach where the court used the expired royalty rate between IWNComm and Apple as a basis for determining the

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ex-ante royalty rates and the smallest saleable patent-practicing unit principle into the determination of FRAND royalty rates. Stern, *supra* note 1, at 199; *see also* IEEE STANDARDS ASSOCIATION, *IEEE SA Standards Board Bylaws*, https://standards.ieee.org/about/policies/bylaws/sect6-7.html [https://perma.cc/8AG6-ANAP] (last visited Jan. 21, 2019).

184. TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15–2370 JVS(DFMX), 2018 WL 4488286, at *50 (C.D. Cal., Sept. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

185. *Unwired Planet I*, [2017] EWHC 711 (Pat), [97] ("I may be differing from certain parts of the decisions in *Innovatio IP Ventures* and *Ericsson v. D-Link* in the US.").

186. *Id.* at [168]–[169] ("The equivalence of the transactions themselves needs to be disentangled from differences in the circumstances in which the transactions were entered into.").

damages. But here the court—BIPC—did not provide any reasoning as to why such a rate would be fair and reasonable: Is it because the two deals are similar? Or is it because Sony and Apple are similarly situated?[187] Further, could the court have contemplated that the same rate should apply to the same set of patents, a view similar to that expressed by the English High Court in *Unwired Planet I*?[188] One may also wonder whether Apple would be obligated to pay the same royalty rate for the ZL '508 patent as that in the expired license if they eventually lost in the ongoing litigation with IWNComm. In applying the comparable licenses approach, the GHPC Guideline requires a court to consider, *inter alia*, "entities of the license transaction, the relevance among license subjects, transaction issues encompassed by the license royalty, and true intention of both parties of the license negotiation."[189] The Guideline also allows courts to make reasonable adjustments to account for discrepancies in background, content, and conditions of the license transactions.[190]

SIPC in *Samsung* did not explicitly adopt the comparable licenses approach for determining a FRAND rate for the parties; rather, it used the *IDC* royalty rate of 0.019% and the Samsung's proffered royalty rate of 2.4% to Apple for the Universal Mobile Telecommunications System SEPs as benchmarks for assessing whether Samsung's offer was FRAND even though they were not directly comparable.[191]

3. *Samsung*: Top-Down Approach?

The *Samsung* court, in determining which party's offer was more compliant with the FRAND principle, compared the relative strength of Huawei's and Samsung's 3G and 4G SEP portfolios, an approach similar to the top-down approach. As discussed above, the top-down approach is advantageous for portfolio licensing. However, when choosing to use the top-down approach for assessing

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187. *See, e.g.*, *TCL*, 2018 WL 4488286, at *28.

188. *Unwired Planet I*, [2017] EWHC 711 (Pat), [175] ("[T]he FRAND rate ought to be generally non-discriminatory in that it is determined primarily by reference to the value of the patents being licensed and has the result that all licensees who need the same kind of licence will be charged the same kind of rate.").

189. GHPC Guideline, *supra* note 46, art. 20.

190. *Id.* art. 22.

191. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*] (finding Samsung's offer of approximately 0.019% unreasonable as compared to its 2.4% royalty offer to Apple for less valuable 3G SEPs).

a global patent portfolio, courts must address at the outset whether a national court has jurisdiction to determine the FRAND rates for a global license for parties in dispute. Justice Birss ruled in the 2017 *Unwired Planet I* decision, later affirmed on appeal, that a national court has jurisdiction to impose a global license despite Huawei's objection.[192] Unsurprisingly, since *Unwired Planet I*, the UK has become a "go-to" forum for many SEP holders.[193] For example, two months after Justice Birss issued the opinion, Conversant rushed to the same court and requested for a determination of a global FRAND rate of its SEPs.[194] As of this writing, the joint appeals brought by Huawei and ZTE against the *Unwired Planet II* and *Conversant* decisions are still pending before the UK Supreme Court.[195]

Samsung did not explicitly address this issue although the court determined that the global license rate proffered by Samsung was not FRAND and that Huawei's proffered rates were FRAND. The GHPC Guideline soon thereafter declared that a court can determine the FRAND rates covering territories exceeding the court's jurisdiction if both parties consent.[196] Similarly, the U.S. court in *TCL* implied that parties' consent is required for the court to proceed to determine global FRAND rates.[197] It remains to be seen whether later cases in China would follow the GHPC Guideline to require consent.

In *Samsung*, the court considered (1) the number of the parties' technology proposals accepted by the SSOs, (2) their respective estimates of confirmed SEPs (as opposed to unilaterally

192. *Unwired Planet I*, [2017] EWHC 711 (Pat), [572] (ruling that consent is not necessary because "[w]illing and reasonable parties would agree on a worldwide licence").

193. Katie Coltart & Brett Shandler, *Setting Global License Rates for Standard Essential Patents: Will the UK Take Centre Stage?*, FINANCIER WORLDWIDE MAG. (Jan. 2020), https://www.financierworldwide.com/setting-global-licence-rates-for-standard-essential-patents-will-the-uk-take-centre-stage#.XoqX28hKiM8 [https://perma.cc/A95Q-HR88].

194. Conversant Wireless Licensing SARL v. Huawei Techs. Co., [2019] EWHC 1687 (Pat) (Eng.).

195. Coltart & Shandler, *supra* note 193.

196. GHPC Guideline, *supra* note 46, art. 16 ("Where territory scope of license of a standard essential patent requested to be determined by one party of the SEP holder and implementing entity exceeds the scope of jurisdiction of the court, a people's court may make a decision on the license royalty within said territory scope of license provided that the other party does not explicitly raise an objection in the litigation proceeding or the objection raised is determined to be unreasonable subject to examination.").

197. TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. CV 15–2370 JVS(DFMX), 2018 WL 4488286, at *4 (C.D. Cal., Sept. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019) ("[D]uring the course of this litigation, TCL agreed to be bound by the Court's determination of FRAND terms and conditions for a worldwide portfolio license, including a release payment for TCL's past unlicensed sales.").

declared SEPs), and (3) the number of valid SEPs by looking to the SEP invalidity decisions.[198] Following this analysis, the court found that Huawei's SEP portfolio in China was stronger than Samsung's, while their relative strength was similar on a worldwide basis.[199] The court therefore deemed Samsung's proposal based on the 0.019% rate determined by the *IDC* court unreasonable because IDC was a non-practicing entity whereas Huawei was an active player and contributor to the technology and because Huawei asserted that it actually licensed from IDC on a higher rate.[200] The court, however, refrained from calculating the exact rate or range of rates for the parties and rather used the analysis as a proxy for assessing the parties' good faith in negotiating.

In general, a FRAND rate determined by the top-down approach can be calculated using the following formula:[201]

$$\textit{Royalty Rate} = \textit{Total Aggregate Royalty} \times \textit{Proportional Share of the Total Aggregate Royalty}$$

$$\textit{Proportional Share} = \frac{\textit{Number of SEPs owned by Licensor}}{\textit{Total Number of SEPs in the Standard}}$$

The *TCL* court applied a regional patent strength ratio to the calculation,[202] whereas the English High Court of Justice in *Unwired Planet I* adjusted the rate in China by using a lower Total Aggregate Royalty (half of that of the U.S. and Europe) in addition to factoring in the number of relevant SEPs in China.[203] Justice Birss also contemplated that some "keystone" invention could be accorded a

198. Katie Feng & Adrian Emch, Huawei v. Samsung—*A New Benchmark for Standard Essential Patent Litigation in China?*, HOGAN LOVELLS: ENGAGE (June 19, 2018), https://www.engage.hoganlovells.com/knowledgeservices/news/huawei-v-samsung-a-new-benchmark-for-standard-essential-patent-litigation-in-china [https://perma.cc/TMN3-3UWD].

199. *Id.* There has been empirical evidence showing that patent applications filed by foreign companies have a harder time obtaining patents if they are declared essential to a standard. Gaétan de Rassenfosse et al., *Discrimination in the Patent System: Evidence from Standard-Essential Patents*, OECD, https://www.oecd.org/site/stipatents/IPSDM17_6.4_bekkers-et-al.pdf [https://perma.cc/EL8J-Z7U9] (last visited Apr. 19, 2020).

200. *IDC*, *supra* note 55.

201. *TCL*, 2018 WL 4488286, at *8. In calculating the proportional share, the TCL court required the licensor's SEPs to be unexpired whereas the total number of SEPs should include expired patents because the total aggregate royalty takes into account the value of expired patents. *Id.* at *8, *18.

202. *Id.* at *24 ("A fair and reasonable royalty must be proportionally related to an SEP owner's geographic patent portfolio strength, and ignoring disparities in geographic patent portfolio strength ignores the fundamental relationship between FRAND and domestic patent law.").

203. *Unwired Planet I*, [2017] EWHC 711 (Pat), [586]–[587].

higher value.[204] Similarly, the GHPC Guideline has adopted the same formula and also allows the value to be adjusted based on certain factors.[205] In *TCL*, for Ericsson's 4G SEPs, the court determined that a FRAND rate would be between approximately 0.2% and 0.5% for Rest of World (including China).[206] The *Unwired Planet I* court concluded that the benchmark FRAND rate for Unwired Planet's 4G SEPs in China would be 0.026%.[207] Given that strength of Huawei's 4G SEP portfolio was much greater than those of companies like Unwired Planet, it was reasonable for the *Samsung* court to find Samsung's proffered royalty rate of 0.019% non-FRAND.

Although some scholars have argued that the *Samsung* court used the more pro-licensor top-down approach to allow Huawei, a domestic SEP holder, to license its SEPs on a higher rate to a foreign SEP implementer,[208] the court may have been justified in doing so. First, courts now generally prefer the top-down approach for portfolio licensing.[209] Second, comparable licenses may not have been available in this case.[210] The royalty rates mentioned in the

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204. *Id.* at [184].

205. GHPC Guideline, *supra* note 46, art. 24 ("The following factors may be taken into account by analyzing the market value of the standard essential patent concerned in the case to determine the license royalty: (i) the contribution of the standard essential patents concerned in the case to product sales and profits, which does not comprise the impact of the patent being included in the standard; (ii) the contribution of the standard essential patents concerned in the case to the standard; (iii) prior to establishment of the standard, the advantage of the patented technology over other alternative technologies; (iv) a sum of license royalties for all the standard essential patents paid for products using the standard essential patents concerned in the cases; and (v) other relevant factors.").

206. *TCL*, 2018 WL 4488286, at *26.

207. *Unwired Planet I*, [2017] EWHC 711 (Pat), [586].

208. Feng & Emch, *supra* note 198.

209. *See generally TCL*, 2018 WL 4488286; *Unwired Planet I*, [2017] EWHC 711 (Pat). The top-down approach was later applied in *Conversant*, where NIPC set royalty rates to 0%, 0.00225%, and 0.0018% for Huawei's sale in China of single-modle 2G or 3G mobile terminal products, single-model 4G mobile terminal products, and multi-model 2G/3G/4G mobile terminal products, respectively. Lu & Zhao, *supra* note 79. The extremely low rates arrived at the court may highlight the inapplicability of the top-down approach to determining FRAND rates when, as in this case, only one SEP is involved. The large difference between the comparable licenses approach and the top-down approach (e.g., 0.13% v. 0.0018% for multi-mode 4G products) may further flag the inapplicability of the latter approach in such a situation. Gao & White, *supra* note 77.

210. Apparently the court did not agree that the IDC license was comparable, and the opinion did not point to any other licenses for the purposes of the comparable license approach. Huawei Jishu Youxian Gongsi Su Sanxing (Zhongguo) Touzi Youxian Gongsi (华为技术有限公司诉三星(中国)投资有限公司) [Huawei Techs. Co. v. Samsung (China) Investment Co.], http://www.chinaipmagazine.com/news-show.asp?21934.html (Shenzhen Intermediate People's Ct. Jan. 4, 2018) (China) [hereinafter *Samsung*].

opinion between Huawei and IDC and between Samsung and Apple were not comparable because the SEPs in dispute were different and because the parties apparently were not similarly situated.[211] Third, the two approaches may have ended up with the same rate. For example, the English High Court in *Unwired Planet I* used the top-down approach to "cross-check" the result obtained using the comparable methodology.[212] The *TCL* court in the United States also deemed that the comparable licenses approach acted as a reasonable check on the top-down approach.[213] Many courts have indeed found that a comparable license provides a probative value for the SEPs at issue in the marketplace.[214]

C. Is a SEP Holder Obligated to License Its SEP to Any Willing License Seeker?

In the United States, SEP holders are obligated to license a SEP to any willing seeker. On November 6, 2018, the U.S. District Court for the Northern District of California ruled in *FTC v. Qualcomm* that a SEP holder's "FRAND commitments include an obligation to license to all comers," including competitors, because the SSO IPR policies require non-discrimination and are essentially pro-competitive.[215]

This same issue has not been specifically addressed by courts in China or Europe. Justice Birss offered a different approach in *Unwired Planet I*, stating that "if a patentee refuses to enter into a [license] which a court has determined is FRAND . . ., a court can and in my judgment should normally refuse to grant relief for patent infringement."[216] Professor Renato Nazzini at King's College London, however, reasoned that EU competition law, among other factors, did not permit "level discrimination," which occurs when a SEP holder chooses to only license the SEP to implementers at a

211. *Id.*

212. *Unwired Planet I*, [2017] EWHC 711 (Pat), [806].

213. *TCL*, 2018 WL 4488286, at *46.

214. *Id.* at *54 ("Actual licenses to the patented technology at issue are probative as to what constitutes a fair and reasonable royalty for those patent rights because such actual licenses reflect the economic value of the patented technology in the market place.") (citing Commonwealth Sci. and Indus. Research Org. v. Cisco Sys. Inc., 809 F.3d 1295, 1303 (Fed. Cir. 2015); Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1227 (Fed. Cir. 2014); Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1315 (Fed. Cir. 2014)).

215. FTC v. Qualcomm Inc., No. 17–CV–00220–LHK, 2018 WL 5848999, at *17, *20 (N.D. Cal. Nov. 6, 2018).

216. *Unwired Planet I*, [2017] EWHC 711 (Pat), [143] ("I do not believe it is necessary in order for the FRAND undertaking to be legally effective, for it to be true that the undertaking is specifically enforceable in such a way that the IPR holder could be compelled to enter into a contract against their will.").

given level of the supply chain.[217] Applying his reasoning, a European court might also rule against discriminatory licensing.

Courts in China might reach a different conclusion. In *IDC*, GHPC supported the lower court's statement that a SEP holder could not directly refuse to grant a license to an implementer willing to pay a reasonable royalty fee.[218] The underpinning for this statement (i.e., "the FRAND obligation should not only guarantee a SEP holder to gain from the technology innovation, but also prevent the SEP holder to ask for unreasonably high royalty rates or unreasonable terms using the standard as a leverage"), however, does not appear to be relevant to the issue. Therefore, this statement may be limited to the facts in that case.

China has generally addressed the "refusal to license" situation through antitrust laws and regulations. In the conditional approval of Google's purchase of Motorola Mobility on May 19, 2012, the Ministry of Commerce ("MOFCOM") only required Google to "treat all *original equipment manufacturers* non-discriminatorily in terms of the Android platform" for the fear that Google might treat the phone maker Motorola Mobility favorably, thereby restricting competition in the relevant market. [219] And the original equipment manufacturers were further limited to those "who have agreed not to differentiate or derive from the Android platform."[220] Upon conclusion of its antitrust investigation on Qualcomm in February 2015, NDRC forbade Qualcomm from refusing to license its SEPs after finding that Qualcomm was in a dominant position in each

217. Renato Nazzini, FRAND-Encumbered Patents, Injunctions and Level Discrimination: What Next in the Interface between IP Rights and Competition Law, SSRN (Mar. 1, 2017), https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID3249059_code1186189.pdf?abstractid=3249059&mirid=1 (finding that Article 102 of the Treaty on the Functioning of the European Union [("TFEU")] prohibits level discrimination that constitutes an abuse of a dominant position). The pertinent part of Article 102 of the TFEU states that "[a]ny 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." Consolidated Version of the Treaty on the Functioning of the European Union art. 102, Oct. 26, 2012, 2012 O.J. (C 326) 47, 89.

218. *IDC*, *supra* note 55.

219. Shangwu Bu Gonggao 2012 Nian Di 25 Hao Guanyu Fujia Xianzhi Xing Tiaojian Pizhun Guge Shougou Motuoluola Yidong Jingying Zhe Jizhong Fan Longduan Shencha Jueding De Gonggao (商务部公告2012年第25号 关于附加限制性条件批准谷歌收购摩托罗拉移动经营者集中反垄断审查决定的公告) [Announcement No. 25, 2012 of the Ministry of Commerce — Announcement of Approval with Additional Restrictive Conditions of The Acquisition of Motorola Mobility by Google] (promulgated by Ministry Com. China, May 19, 2012, effective May 19, 2012), http://english.mofcom.gov.cn/article/policyrelease/questions/201206/20120608199125.shtml [https://perma.cc/8l6d-n4j4].

220. *Id.*

relevant market.[221] At the end of that year, NDRC clarified in Section III of the 2015 Anti-Monopoly Guidelines that refusal to license can be permitted unless the SEP holder possesses a market dominant position and has no justifiable reasons for doing so, and prescribes five factors for determining whether a SEP holder is in a market dominant position.[222] Similarly, Article 15 of the 2017 Anti-Monopoly Guidelines issued by MOFCOM subjects the patentee's refusal to license to both FRAND and antitrust analyses.[223] For deciding whether the SEP holder possesses a market dominant position, Article 13 stipulates the same factors as those in the 2015 Guidelines.[224] Therefore, when such a dispute arises, a Chinese court would probably conduct a fact-specific inquiry, in contrast to the *FTC v. Qualcomm* court's sweeping prohibition.

V. CONCLUSION

Disputes over FRAND-encumbered SEPs have become one of the most challenging patent issues in recent years. Courts around the world still have not reached consensus on what FRAND means and what a FRAND commitment entails. As many Chinese companies are actively involved in acquiring and enforcing SEPs, China has become an increasingly important tribunal for resolving these SEP disputes, and therefore, it is crucial to understand how courts in China have responded to some common FRAND questions and how they will address emerging issues.

This Note describes the FRAND framework Chinese courts have established through three landmark cases—*IDC*, *Sony*, and *Samsung*—in a comparative context and offers the following answers to three key FRAND questions: (1) Chinese courts do not regard a SEP holder's failure to license on FRAND terms a breach of

221. Guojia Fazhan He Gaige Weiyuanhui Xingzheng Chufa Juedin Shu 2015 1 Hao (国家发展和改革委员会行政处罚决定书[2015]1号) [National Development and Reform Commission Administrative Penalty Decision [2015] No. 1], http://finance.sina.com.cn/chanjing/gsnews/20150302/135221623260.shtml (China) (last visited May 21, 2020).

222. NDRC Anti-Monopoly Guideline, *supra* note 112, § 3.

223. Guanyu Lanyong Zhishi Chanquan de Fan Longduan Zhinan (Zhengqiu Yijian Gao) (关于滥用知识产权的反垄断指南(征求意见稿)) [Guidelines on Prohibition of Abuses of Intellectual Property Rights (Draft for Comments)] (promulgated by Ministry Com. China, Mar. 23, 2017), images.mofcom.gov.cn/fldj/201703/20170323141351774.doc [https://perma.cc/44U2-RFC7] (last visited June 18, 2020).

224. *Id.* art. 13 lists the following factors: "(1) market value, and application scope and extent of the standard; (2) whether alternative standards exist, including the possibility and costs of using alternative standards; (3) how much the industry relies on the relevant standard; (4) the development and compatibility of the relevant standard; and (5) the possibility of the standard-adopted technology being substituted."

contract; (2) injunctive relief can be granted by courts under certain circumstances; and (3) courts can employ various methodologies, particularly the comparable license and top-down approaches, for determining a FRAND royalty rate for the parties. This Note further suggests that Chinese courts would probably not treat a SEP holder's refusal to license to certain willing license seekers a *per se* violation of its FRAND undertaking.

Comparative analysis of how courts in China, United States, and Europe deal with FRAND disputes reveals that Chinese courts have adopted an approach that bears more resemblance to the European model, although certain differences and similarities exist among all these jurisdictions. First, in China and Europe, the FRAND undertaking by a SEP holder creates a legal obligation, that is, the SEP holder is obligated to negotiate in good faith and offer terms that are FRAND to an implementer, and the implementer can sue the SEP holder for violating the FRAND obligation. The U.S. courts, on the other hand, view an implementer as a third-party beneficiary to the agreement between a SEP holder and an SSO. Therefore, the implementer can sue the patentee on a breach of contract claim. In practice, the disparate legal theories do not make much difference, as in all these jurisdictions courts focus on good faith negotiations and FRAND terms for finding the SEP holder liable. Second, while courts in both China and Europe have repeatedly handed down injunctions in favor of SEP holders, the U.S. courts have yet to make this relief available. Between the Chinese and European courts, they consider similar factors in determining whether to grant an injunction, but Chinese courts apply a balancing approach in contrast to Europe courts' mechanical framework. Third, English courts in one case have established global FRAND rates despite one party's objection, whereas courts in other jurisdictions require, explicitly or implicitly, parties' consent before proceeding with determining the global rates. Finally, although a U.S. federal court has prohibited discriminatory licensing of a SEP by the patentee, Chinese and European courts have not had a chance to rule on the same issue and may very well reach different results.

While the FRAND framework in China is in principle very similar to that in the United States and Europe, using the balancing approach in the good faith determination certainly gives courts more leeway in arriving at "desirable" outcomes. Not surprisingly, under the general protectionism policy, in each of the three cases the court sided with the party having the home-field advantage, which has attracted a lot of criticism among scholars and foreign patent owners. It remains to be seen how the new SPC IP Tribunal will reshape the FRAND jurisprudence: on the one hand, China has avowed to strengthened IP protection and equalize treatment between domestic and foreign patentees; on the other hand, if the current tension between China and the United States perpetuates, U.S. SEP holders will very likely face great obstacles in Chinese courts.