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## Implementing the FRAND Standard in China

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# Implementing the FRAND Standard in China

*Jyh-An Lee\**

## ABSTRACT

*The modern world relies on technical standards, most of which involve standard-essential patents (SEPs). To balance SEP holders' fair compensation with standard implementers' access to standardized technologies, standard-setting organizations (SSOs) generally require that their members commit to license their SEPs on a fair, reasonable, and non-discriminatory (FRAND) basis. In recent years, the communications industry has seen a growing amount of litigation concerning SEPs and FRAND in many jurisdictions. As China has grown into a major player and market in the worldwide communications business, its public policy, court decisions, and private business strategies concerning SEPs and FRAND are likely to have a huge global impact in the high-technology sector. The high-profile Huawei v. IDC is the first Chinese court decision ruling on FRAND-encumbered SEPs issues. This is also the first Asian case in which the court determined a FRAND royalty rate to calculate the fee paid by the standard implementer to the SEP holder. Based on the Chinese government's policy toward technical standards and the case of Huawei, this Article identifies two distinguishing features in China's encounter with*

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*standard-related issues. The first is the active role played by the government in domestic standard-setting activities, while the second is Chinese courts' civil law approach, associated with good faith, to the enforcement of FRAND commitments. Based on a comparative and critical viewpoint, this Article uses Huawei as an example to illustrate the challenges and perplexities for the judicial determination of a FRAND rate. The reasoning in Huawei is far from sufficient and satisfactory, and it is unclear whether the Chinese courts are tasked to implement the government's industrial policy. Nonetheless, Huawei did identify some crucial factors concerning FRAND and SEPs, and it has had a significant impact on Chinese related standard-setting activities.*

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## I. INTRODUCTION

Technical standards have become a core component of a variety of information-communication-technology (ICT) products.<sup>1</sup> Each of these products may use hundreds of standards, each with thousands of patents in it.<sup>2</sup> Currently, most standard-setting organizations (SSOs) require their members to license standard-essential patents (SEPs) under fair, reasonable, and non-discriminatory (FRAND) terms.<sup>3</sup> SEPs cover inventions that are necessary to comply with a technical standard and are particularly important in the communications industry. Some complicated legal issues concerning SEPs and FRAND have been the focus of recent patent and antitrust scholarship. These include, but are not limited to, antitrust and competition law concerns,<sup>4</sup> injunction issues,<sup>5</sup> the determination of the FRAND rate,<sup>6</sup> and dispute resolution

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1. See, e.g., NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING IN THE GLOBAL ECONOMY: LESSONS FROM INFORMATION AND COMMUNICATIONS TECHNOLOGY 18–19 (2013) [hereinafter NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING]; RON SCHNEIDERMAN, MODERN STANDARDIZATION: CASE STUDIES AT THE CROSSROADS OF TECHNOLOGY, ECONOMICS, AND POLITICS 1–2 (2015); Jay P. Kesan & Carol M. Hayes, *FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 IND. L.J. 231, 237–38 (2014); Daryl Lim, *Standard Essential Patents, Trolls, and the Smartphone Wars: Triangulating the End Game*, 119 PENN. ST. L. REV. 1, 13–14 (2014) [hereinafter Lim, *Standard Essential Patent*].

2. Jorge L. Contreras, *Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing*, 79 ANTITRUST L.J. 47, 49 (2013) [hereinafter Contreras, *Fixing FRAND*].

3. See *infra* note 35 and accompanying text. The term FRAND is sometimes used interchangeably with RAND (reasonable and nondiscriminatory). They have the same meaning in the realm of SEP licensing. See, e.g., Dennis W. Carlton & Allan L. Shampine, *An Economic Interpretation of FRAND*, 9 J. COMPETITION L. & ECON. 531, 531 n.1 (2013) [hereinafter Carlton & Shampine, *Economic Interpretation of FRAND*]; Jorge L. Contreras & Richard J. Gilbert, *A Unified Framework for RAND and Other Reasonable Royalties*, 30 BERKELEY TECH. L.J. 1447, 1453–54 (2015) [hereinafter Contreras & Gilbert, *A Unified Framework for RAND*]; Thomas F. Cotter, *Comparative Law and Economics of Standard-Essential Patents and FRAND Royalties*, 22 TEX. INTELL. PROP. L.J. 311, 312 (2014); Kassandra Maldonado, Note, *Breaching RAND and Reaching for Reasonable: Microsoft v. Motorola and Standard-Essential Patent Litigation*, 29 BERKELEY TECH. L.J. 419, 419 n.6 (2014).

4. See, e.g., *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 876 (9th Cir. 2012); *Rambus, Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008); Philippe Chappatte, *FRAND Commitments—The Case for Antitrust Intervention*, 5 EUR. COMPETITION J. 319, 319 (2009); Cotter, *Standard-Essential Patents*, *supra* note 3, at 327–42; Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1 (2005); Xiuting Yuan & Paul Kossof, *Developments in Chinese Anti-Monopoly Law: Implications of Huawei v. InterDigital on Anti-Monopoly Litigation in Mainland China*, 37 EUR. INTELL. PROP. REV. 438 (2015).

5. See, e.g., Cotter, *supra* note 3, at 320–27; Paul Nihoul, *Injunctions on Standard Essential Patents: In Search of a “Clear Bright Line”*, 6 J. EUR. COMPETITION L. & PRAC. 151 (2015).

6. See, e.g., Damien Geradin, *The Meaning of “Fair and Reasonable” in the Context of Third-Party Determination of FRAND Terms*, 21 GEO. MASON L. REV. (SPECIAL ISSUE) 919 (2014) [hereinafter Geradin, *The Meaning of “Fair and Reasonable”*].

mechanisms for SEP holders and standard implementers.<sup>7</sup> These issues are of great importance to the ICT industry, especially for manufacturers of mobile or smartphone devices.<sup>8</sup> Courts and competent authorities in many jurisdictions around the world have had to cope with this series of legal problems.<sup>9</sup> As standards have global scope, those legal problems are often transnational.<sup>10</sup>

China's policy toward SEPs has evolved in a way that demonstrates sensitivity to the international norms and various stakeholders in the standards environment.<sup>11</sup> As China has grown into a major market in the worldwide communications business, its public policy, court decisions, and private business strategies concerning SEPs and FRAND are likely to have a global impact in the high-technology sector.<sup>12</sup> This is why some researchers claim that "what happens in China on FRAND will impact decision-making in the boardrooms of Silicon Valley."<sup>13</sup> The recent Chinese case *Huawei v. IDC*<sup>14</sup> represents an important judicial development that has drawn global attention. Like most FRAND disputes, where standard implementers claim that

7. See generally Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135 (2013) (stating that courts have to interpret FRAND commitments) [hereinafter Lemley & Shapiro, *Setting Reasonable Royalties*].

8. See, e.g., Enrico Bonadio, *Standardization Agreements, Intellectual Property Rights and Anti-competitive Concerns*, 3 QUEEN MARY J. INTELL. PROP. 22, 25–26 (2013); Thomas H. Chia, Note, *Fighting the Smartphone Patent War with RAND-Encumbered Patents*, 27 BERKELEY TECH. L.J. 209, 213 (2012); Contreras, *Fixing FRAND*, *supra* note 2, at 48; Cotter, *supra* note 3, at 313; Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 924, 942–43; Kirti Gupta, *Technology Standards and Competition in the Mobile Wireless Industry*, 22 GEO. MASON L. REV. 865, 874–77 (2015); Maldonado, *supra* note 3, at 420; Daniel S. Sternberg, *A Brief History of RAND*, B.U. J. SCI. & TECH. L. 211, 234 (2014).

9. See, e.g., Cotter, *supra* note 3, at 312; Leon B. Greenfield et al., *SEP Enforcement Disputes Beyond the Water's Edge: A Survey of Recent Non-U.S. Decisions*, 27 ANTITRUST 50 (2013); Lim, *Standard Essential Patent*, *supra* note 1, at 9; Koren W. Wong-Ervin, *Standard-Essential Patents: The International Landscape*, 2014 A.B.A. SEC. ANTITRUST L. 4, [https://www.ftc.gov/system/files/attachments/key-speeches-presentations/standard-essential\\_patents\\_the\\_intl\\_landscape.pdf](https://www.ftc.gov/system/files/attachments/key-speeches-presentations/standard-essential_patents_the_intl_landscape.pdf) [<https://perma.cc/LDK4-DTKA>].

10. See, e.g., Julian M. Beach, Note, *Transatlantic (F)RANDs and Converging Standards: Finding Balance Between Jurisdictions in International Standard Setting*, 54 COLUM. J. TRANSNAT'L L. 454, 459 (2016); see also Matthew Norris, Note, *Blocking Blocks at the Border: Examining Standard-Essential Patent Litigation Between Domestic Companies at the ITC*, 98 MINN. L. REV. 713, 741 (2013) (noting the international SEP cases handled by the International Trade Commission).

11. See, e.g., NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 132.

12. Daniel Sokol & Wentong Zheng, *FRAND in China*, 22 TEX. INTELL. PROP. L.J. 71, 73–74 (2013) [hereinafter Sokol & Zheng, *FRAND in China*].

13. *Id.* at 74.

14. Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司) ([Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

the patentees have breached the FRAND terms and courts are asked to determine the reasonable royalty rate,<sup>15</sup> the Chinese courts in *Huawei* were asked to make a substantive judgment regarding the patentee's violation of FRAND commitments and the reasonable royalty.<sup>16</sup> This is the first court decision that ruled on the rate for a FRAND-encumbered SEP in China.<sup>17</sup> This Article uses the *Huawei* case as a lens to understand China's current judicial policy toward FRAND and SEPs, the challenges it faces, and the implications for SEP holders as well as standard implementers.

The Article proceeds in five parts. Part I provides an overview of SEP and FRAND. It briefly introduces the concept of standards, SEPs, the function of FRAND generally, and relevant developments in China specifically. Standard-setting activities in China are characterized by strong government involvement. Part II offers the background, key issues, and an overview of the *Huawei* case. Part III explores the enforcement mechanism for FRAND in China. The Chinese courts have carved out their own way, based on the principles of fairness and good faith, to enforce SEP holders' FRAND commitments.<sup>18</sup> As the application of a good faith doctrine is closely related to local business practices, norms, or even moral standards,<sup>19</sup> it is sometimes difficult for foreign SEP holders to understand how this doctrine can become the mechanism to enforce FRAND commitments.<sup>20</sup> Moreover, this Article analyzes the differences in the good faith principle between Chinese law and American law in the context of FRAND-encumbered SEPs. The Chinese courts apply good faith to establish an independent legal basis for FRAND obligation,<sup>21</sup> whereas

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15. See, e.g., Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1160.

16. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

17. See, e.g., Guangliang Zhang & Gary Zhang, *A Review of Huawei v IDC*, MANAGING INTELL. PROP. (Mar. 27, 2015), <http://www.managingip.com/Article/3440420/A-review-of-Huawei-v-IDC.html> [<https://perma.cc/58Z2-KFWD>]. After *Huawei v. IDC*, there is an ongoing patent litigation initiated by Qualcomm against Meizu, an Alibaba invested smartphone maker, in Beijing Intellectual Property Court, regarding the infringement of the former's 3G and 4G SEPs. See, e.g., He Hui Feng, *Smartphone Maker Meizu Seeks Review of Qualcomm License Deals Amid US Giant's Patent Lawsuit*, SOUTH CHINA MORNING POST (June 28, 2016), <http://www.scmp.com/tech/china-tech/article/1982746/smartphone-maker-meizu-seeks-review-qualcomm-license-deals-amid-us> [<https://perma.cc/MFP5-62V7>]; Juro Osawa, *Qualcomm Sues Alibaba-Backed Smartphone Maker Meizu for Patent Infringement*, WALL ST. J., <http://www.wsj.com/articles/qualcomm-sues-alibaba-backed-smartphone-maker-meizu-for-patent-infringement-1466766395> [<https://perma.cc/KB9S-FMZ7>] (last updated June 26, 2016).

18. See *infra* notes 133–83 and accompanying text.

19. See, e.g., BING LING, *CONTRACT LAW IN CHINA* 49–50 (2002).

20. Cf. PITMAN B. POTTER, *THE CHINESE LEGAL SYSTEM: GLOBALIZATION AND LOCAL LEGAL CULTURE* 43 (2001) (indicating that the way Chinese courts interpret the doctrine of good faith is unfamiliar to foreigners).

21. See *infra* notes 107–33 and accompanying text.

good faith in the US context is incidental to the contractual relationship.<sup>22</sup> Part IV discusses the judicial determination of FRAND violations and the appropriate FRAND rate. It investigates the main issues from a comparative perspective, comparing approaches taken by the US courts and the Chinese *Huawei* court. Many similarities and nuances between the US and Chinese approaches to FRAND and SEPs are illustrated therein. Some critical issues in the *Huawei* decision are also analyzed in depth. These issues include the timing of the hypothetical negotiation and to what extent a previous transaction and its royalty rate can be viewed as a comparable one for FRAND determination. Part V concludes with the lessons that we can learn from *Huawei*, including the unique approach to SEP under Chinese law, its strengths and weaknesses, and the growing importance of Chinese court decisions in the global high-tech industry.

## II. SEP AND FRAND

Standards or technical standards are “any set of technical specifications that either provide or are intended to provide a common design for a product or process.”<sup>23</sup> Standards can foster innovation and competition significantly.<sup>24</sup> Standardization provides huge benefits to both consumers and manufacturers.<sup>25</sup> It ensures that a variety of different products from different manufacturers can interoperate smoothly.<sup>26</sup> Standards enable consumers to enjoy various compatible products, and manufacturers benefit from massive commercial

22. See *infra* note 171 and accompanying text.

23. Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1896 (2002); see also NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 1 (“Standards are technical specifications describing means of achieving certain beneficial features of products and services.”).

24. See, e.g., U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 33–56 (2007), <http://www.justice.gov/atr/public/hearings/ip/222655.pdf> [<https://perma.cc/9G3W-78ZW>]; Fei Deng, *Determining the FRAND Rate: U.S. Perspectives on Huawei v. InterDigital*, COMPETITION POL'Y INT'L, (Feb. 12, 2014), <https://www.competitionpolicyinternational.com/determining-the-frand-rate-u-s-perspectives-on-huawei-v-interdigital/> [<https://perma.cc/EZ6Y-363W>]; Lim, *Standard Essential Patent*, *supra* note 1, at 3.

25. See, e.g., Bonadio, *supra* note 8, at 24–25; Geradin, *The Meaning of “Fair and Reasonable”*, *supra* note 6, at 933; Kesan & Hayes, *supra* note 1, at 237–38.

26. See, e.g., NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 1; Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 534; Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1453; Lemley, *supra* note 23, at 1896; Lim, *Standard Essential Patent*, *supra* note 1, at 3; Srividhya Ragavan et al., *FRAND v. Compulsory Licensing: The Lesser of the Two Evils*, 14 DUKE L. & TECH. REV. 83, 86 (2015); Sokol & Zheng, *FRAND in China*, *supra* note 12, at 71.

opportunities.<sup>27</sup> Devices including telephones, USBs, computers, smartphones, and tablets all involve different technical standards.<sup>28</sup> Therefore, standards have become an essential part of our daily lives and the world of rapid technological progress.<sup>29</sup>

Standard-setting organizations (SSOs) are organizations whose primary activities are developing, coordinating, promulgating, and revising technical standards that are intended to address the needs of a wide range of implementers and consumers.<sup>30</sup> SSOs play an important role in coordinating various demands from developers and manufacturers.<sup>31</sup> This Part will briefly introduce the concepts of SEPs and FRAND resulting from relevant standard-setting activities, both generally and in China specifically.

### A. SEPs and FRAND in General

Implementing a standard sometimes requires employing certain patents when standard implementers cannot design around the patents or cannot choose an alternative technology to replace these patents.<sup>32</sup> These patents are the so-called SEPs.<sup>33</sup> Standardization and the market demand for interoperability enabled by standards can lead to a higher probability of infringing SEPs, on which more manufacturers need to build their products.<sup>34</sup> Currently, in their patent or intellectual

27. See, e.g., Bonadio, *supra* note 8, at 24–25; Geradin, *The Meaning of “Fair and Reasonable”*, *supra* note 6, at 933; Kesan & Hayes, *supra* note 1, at 237–38.

28. See, e.g., Jorge L. Contreras, *A Market Reliance Theory for FRAND Commitments and Other Patent Pledges*, 2015 UTAH L. REV. 479, 480 (2015) [hereinafter Contreras, *Market Reliance Theory*]; Contreras, *Fixing FRAND*, *supra* note 2, at 47; Lemley, *supra* note 23, at 1896; Lim, *Standard Essential Patent*, *supra* note 1, at 3.

29. See, e.g., Lemley, *supra* note 23, at 1896.

30. See, e.g., *id.* at 1892–93; see also Bonadio, *supra* note 8, at 24; Stéphanie Chuffart-Finsterwald, *Patent Markets: An Opportunity for Technology Diffusion and FRAND Licensing?*, 18 MARQ. INTEL. PROP. L. REV. 335, 347 (2014); Ragavan et al., *supra* note 26, at 87; Sternberg, *supra* note 8, at 212, 223–24.

31. See, e.g., Geradin, *The Meaning of “Fair and Reasonable”*, *supra* note 6, at 933; Lim, *Standard Essential Patent*, *supra* note 1, at 10–11; see also MICHAEL HELLER, *THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES* 196 (2008) (“With SSOs, each player knows that individual investments will be complementary with the products made by others.”).

32. See, e.g., Maldonado, *supra* note 3, at 432; Ragavan et al., *supra* note 26, at 88; Maurice Schellekens, *Horizon 2020 and Fair and Reasonable Licenses*, 21(8) COMPUTER & TELECOMM. L. REV. 234, 234–35 (2015); see also Lim, *Standard Essential Patent*, *supra* note 1, at 4 (“When a standard becomes ubiquitous, . . . using an alternative standard may not be an option.”).

33. See, e.g., Contreras, *Fixing FRAND*, *supra* note 2, at 50–51; Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1136; Maldonado, *supra* note 3, at 419; James Ratliff & Daniel L. Rubinfeld, *The Use and Threat of Injunctions in the RAND Context*, 9 J. COMPETITION L. & ECON. 1, 3 (2013).

34. See, e.g., Lim, *Standard Essential Patent*, *supra* note 1, at 20.



property (IP) policies, most SSOs require their members to license any SEPs to other members on FRAND terms.<sup>35</sup> FRAND is designed to balance the interests of SEP holders and standard implementers by ensuring the former's fair compensation and the latter's access to the standard.<sup>36</sup> On the one hand, the FRAND rate should be high enough so that inventors' incentives to develop new technologies will not be hampered.<sup>37</sup> On the other hand, SEP holders are obliged to FRAND commitment so that implementers can legally employ the SEPs without the risk of infringement,<sup>38</sup> being locked in by the SEPs,<sup>39</sup> or losing their standard-specific investments.<sup>40</sup>

It is widely believed that the purpose of FRAND terms is to prevent the "hold-up problem,"<sup>41</sup> wherein SEP holders withhold a license until an implementer agrees to pay an unduly high royalty rate for the patent.<sup>42</sup> Because implementers will have invested

35. See, e.g., NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 1; Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 531–32; Contreras, *Fixing FRAND*, *supra* note 2, at 51, 55; Cotter, *supra* note 3, at 311–12; Layne Keele, *Holding Standards for Ransome: A Remedial Perspective on RAND Licensing Commitments*, 64 U. KAN. L. REV. 187, 190–91 (2015); Kesan & Hayes, *supra* note 1, at 233, 238; Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1136–37; Doug Lichtman, *Understanding the RAND Commitment*, 47 HOUS. L. REV. 1023, 1025 (2010); Lim, *Standard Essential Patent*, *supra* note 1, at 9–10; Maldonado, *supra* note 3, at 419; Ragavan et al., *supra* note 26, at 86–87; Ratliff & Rubinfeld, *supra* note 33, at 4; Sokol & Zheng, *FRAND in China*, *supra* note 12, at 71.

36. See, e.g., Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 922, 932, 938; Gupta, *supra* note 8, at 868; Lim, *Standard Essential Patent*, *supra* note 1, at 41; Maldonado, *supra* note 33, at 422–25; J. Gregory Sidak, *The Meaning of FRAND, Part II: Injunctions*, 11 J. COMPETITION L. & ECON. 201, 211–12 (2015).

37. See, e.g., *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at \*11 (N.D. Ill. Oct. 3, 2013); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at \*12 (W.D. Wash. Apr. 25, 2013); Sidak, *supra* note 36, at 212.

38. Maldonado, *supra* note 3, at 426.

39. Lim, *Standard Essential Patent*, *supra* note 1, at 42.

40. Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 535–36; Contreras, *Fixing FRAND*, *supra* note 2, at 56–57; Lim, *Standard Essential Patent*, *supra* note 1, at 29; Sidak, *supra* note 36, at 211–12; see also Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1488 ("SEPs should not benefit from switching costs that arise from investments that are specific to the standard.").

41. Patent hold-up problems take place when a patent holder refuses to license a patent on expected terms, and, therefore, holds up the progress of the diffusion of new technologies. See Robert P. Merges & Jeffrey M. Kuhn, *An Estoppel Doctrine for Patented Standards*, 97 CALIF. L. REV. 1, 10, 49 (2009).

42. See, e.g., *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at \*12 (W.D. Wash. Apr. 25, 2013); Rebecca Haw Allensworth, *Casting A FRAND Shadow: The Importance of Legally Defining "Fair and Reasonable" and How Microsoft v. Motorola Missed the Mark*, 22 TEX. INTELL. PROP. L.J. 235, 244 (2014); Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 534; Jorge L. Contreras, *A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust Through A Historic Lens*, 80 ANTITRUST L.J. 39, 42 (2015); Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1456; Contreras, *Fixing FRAND*, *supra*

substantially in developing products based on the specific standard, it is quite expensive to opt out of the standard.<sup>43</sup> Consequently, SEP holders enjoy an advantageous position in negotiations associated with licensing the subject patents to other entities due to the SSOs' adoption decision, rather than the incremental value of those patents.<sup>44</sup> Some researchers believe that standardization may enable SEP owners to demand an excessive license rate, which may be "as much as 100 times the adjudicated value of the technology."<sup>45</sup> Professors Colleen V. Chien and Mark A. Lemley correctly pointed out that the hold-up problem is particularly harmful to industries that produce multicomponent products, of which only a small part is claimed by patent holders for infringement.<sup>46</sup> Smartphone and mobile products are in precisely such an industry.

Although FRAND provisions are quite common in SSOs' IP policies, none of these policies define what is "fair" or "reasonable."<sup>47</sup> The FRAND commitment is, therefore, viewed as an "incomplete contract."<sup>48</sup> Although some scholars suggest the incompleteness of

note 2, at 49–51; Gupta, *supra* note 8, at 866, 882; Keele, *supra* note 35, at 189; Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007); Lim, *Standard Essential Patent*, *supra* note 1, at 4, 29; Maldonado, *supra* note 3, at 428; Ragavan et al., *supra* note 26, at 89–90; Sidak, *supra* note 36, at 211.

43. See, e.g., Contreras, *Fixing FRAND*, *supra* note 2, at 48–49; Lim, *Standard Essential Patent*, *supra* note 1, at 3.

44. See, e.g., Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1456; Contreras, *Fixing FRAND*, *supra* note 2, at 50–51; Maldonado, *supra* note 3, at 428; see also Anne Layne-Farrar, A. Jorge Padilla & Richard Schmalensee, *Pricing Patents for Licensing in Standard-Setting Organizations: Making Sense of FRAND Commitments*, 74 ANTITRUST L.J. 671, 672 (2007) (indicating that FRAND mechanism is designed to avoid the abuse of market power brought by the standard); Ratliff & Rubinfeld, *supra* note 33, at 3.

45. Lim, *Standard Essential Patent*, *supra* note 1, at 4.

46. Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 39 (2012).

47. See, e.g., RUDI BEKKERS & ANDREW UPDEGROVE, A STUDY OF IPR POLICIES AND PRACTICES OF A REPRESENTATIVE GROUP OF STANDARDS SETTING ORGANIZATIONS WORLDWIDE 102–03 (2012), [http://sites.nationalacademies.org/PGA/step/IPManagement/PGA\\_072197](http://sites.nationalacademies.org/PGA/step/IPManagement/PGA_072197) [<https://perma.cc/A6N7-GSNV>]; Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 532; Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1454; Contreras, *Fixing FRAND*, *supra* note 2, at 51; Lemley, *supra* note 23, at 1913–14, 1964–65; Lichtman, *supra* note 35, at 1031; Ragavan et al., *supra* note 26, at 90–91; see also Cotter, *supra* note 3, at 312 (stating that SSOs are not obliged to define FRAND); Kesan & Hayes, *supra* note 1, at 245 (claiming that "the SSO generally provides no guidance for what terms will be acceptable" for FRAND commitment); Maldonado, *supra* note 3, at 419–20 (describing "the lack of guidance as to what 'reasonable' licensing means").

48. See, e.g., Geradin, *The Meaning of "Fair and Reasonable," supra* note 6, at 922; Lim, *Standard Essential Patent*, *supra* note 1, at 22; Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157, 162–64 (2015); see also Maldonado, *supra* note 3, at 427 (stating that contract does not answer the questions "What is reasonableness? Who determines reasonableness? How is reasonableness determined?").

FRAND is necessary and desirable for negotiations between SEP holders and standard implementers,<sup>49</sup> controversies occasionally occur when a standard implementer fails to reach an agreement regarding the FRAND rate with the SEP holder.<sup>50</sup> The central disputes are primarily about whether the rates offered by the SEP holder are consistent with its FRAND commitment.<sup>51</sup> If not, the dispute then centers on how a court should decide the FRAND rate for both parties.<sup>52</sup>

### B. SEPs and FRAND in China

Unlike the western world, where standard setting involves a high degree of market-driven private ordering,<sup>53</sup> the Chinese government has played an active role in relevant standards activities. In China, national standards are supervised by the Standardization Administration of China (SAC) under the General Administration of Quality Supervision, Inspection, & Quarantine (AQSIQ) of the State Council.<sup>54</sup> At the sector level, standard-setting is overseen by relevant government industries or the Ministry of Industry and Information Technology (MIIT).<sup>55</sup> The government's active role demonstrates its

49. See, e.g., Richard A. Epstein, F. Scott Kieff & Daniel F. Spulber, *The FTC, IP, and SSOs: Government Hold-Up Replacing Private Coordination*, 8 J. COMPETITION L. & ECON. 1, 12 (2012); Geradin, *The Meaning of "Fair and Reasonable,"* *supra* note 6, at 930 (arguing that such incompleteness is inevitable and beneficial).

50. See, e.g., Ichiro Nakayama & Yoshiyuki Tamura, *Denial of Injunctive Relief on Grounds of Equity: Situation in the U.S. and Japan*, in COMPULSORY LICENSING—PRACTICAL EXPERIENCES AND WAYS FORWARD 267, 285 (Reto M. Hilty & Kung-Chung Liu eds., 2015).

51. See, e.g., Contreras, *Fixing FRAND*, *supra* note 2, at 52–54; Deng, *supra* note 24; Geradin, *The Meaning of "Fair and Reasonable,"* *supra* note 6, at 940–41; see also Lim, *Standard Essential Patent*, *supra* note 1, at 5 (“When disputes occur, they reveal a stark disparity of views on the meaning of FRAND obligations.”); Maldonado, *supra* note 3, at 420 (describing “a flood of litigation seeking to define what constitutes reasonable royalty rates”).

52. See, e.g., Lichtman, *supra* note 35, at 1032; see also Kesan & Hayes, *supra* note 1, at 239 (“SSOs adopt vague language requiring fairness and reasonableness, leaving it to the courts to determine what license terms would be fair and reasonable.”).

53. See, e.g., Alden F. Abbott, *US Government Antitrust Intervention in Standard-Setting Activities and the Competitive Process*, 18 VAND. J. ENT. & TECH. L. 225, 232 (2016); Allensworth, *supra* note 42, at 236; see also Contreras, *Fixing FRAND*, *supra* note 2, at 47 (“Most of the thousands of technical standards currently deployed throughout the world were developed collaboratively by market participants in voluntary standard-development organizations.”); Gupta, *supra* note 8, at 866 (“A broad variety of firms collaborate to develop common technology standards . . .”); Kesan & Hayes, *supra* note 1, at 237 (stating that SSOs are voluntary collectives representing private companies).

54. See, e.g., NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 123–25; Sokol & Zheng, *FRAND in China*, *supra* note 12, at 80; Jun Su & Vladislav V. Fomin, *Balancing Public and Private Interests in ICT Standardisation: The Case of AVS in China*, in WHAT KIND OF INFORMATION SOCIETY? GOVERNANCE, VIRTUALITY, SURVEILLANCE, SUSTAINABILITY, RESILIENCE 69 (Jacques Berleur, Magda David Hercheui & Lorenz M. Hilty eds., 2010).

55. Sokol & Zheng, *FRAND in China*, *supra* note 12, at 80.

intention to inject industrial policy considerations into standard-setting activities.<sup>56</sup> As setting up national standards has become an important policy goal in China,<sup>57</sup> the Chinese government has made it clear in its policy plan that indigenous technologies should take precedence in being adopted into the Chinese standards.<sup>58</sup> Consequently, it is not surprising that foreign enterprises have experienced difficulties in participating in the standard-setting activities in China.<sup>59</sup> Some foreign companies also have concerns about inadequate IP protection in those Chinese standard-setting activities.<sup>60</sup>

The first FRAND provision adopted in the private sector in China appeared in the intellectual property rights policy of the Audio Video Coding Standard Working Group in China (AVS).<sup>61</sup> AVS is an important SSO in China. Twenty percent of its members are public institutions, including universities and research institutes.<sup>62</sup> Members of AVS are required to make *ex ante* FRAND or royalty-free commitments.<sup>63</sup> AVS's FRAND or royalty-free requirement was later adopted by other SSOs in China, such as the China Electronic Standardization Institute (CESI).<sup>64</sup> The active involvement of public institutions partly explains the industrial policy considerations in standard-setting activities.

By fostering endogenous standards, the Chinese government aims to advance the nation's technological capability and develop new talent for future development.<sup>65</sup> However, as standards involve the interaction between domestic companies and the global market, domestic policy toward standards may not be sufficient to foster industrial development. Accordingly, in 2006, China submitted a position paper to the Committee on Technical Barriers to Trade 2006

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56. *Id.* at 81.

57. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 123.

58. Sokol & Zheng, *FRAND in China*, *supra* note 12, at 82.

59. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 128–89.

60. *Id.* at 129; *see also* Ruth Taplin, *Cross-Border Intellectual Property and Theoretical Models*, in INTELLECTUAL PROPERTY, INNOVATION AND MANAGEMENT IN EMERGING ECONOMIES 1, 7 (Ruth Taplin & Alojzy Z. Nowak eds., 2010) (noting that foreign companies may be forced to transact their patents without fair and reasonable treatment in the indigenous-based standard-setting activities in China).

61. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 126.

62. Su & Fomin, *supra* note 54, at 67–68.

63. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 126–27; Su & Fomin, *supra* note 54, at 67–68.

64. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 127.

65. *See, e.g.*, Su & Fomin, *supra* note 54, at 69.

(“TBT Committee”) in the World Trade Organization (WTO), highlighting the potential negative impact of intellectual property on standardization.<sup>66</sup>

### III. BACKGROUND OF *HUAWEI V. IDC*

Huawei is a Chinese company with its headquarter in Shenzhen.<sup>67</sup> It is one of the largest telecommunications equipment and device producers in the world.<sup>68</sup> InterDigital Communications (IDC)<sup>69</sup> is a non-practicing entity (NPE)<sup>70</sup> whose business model is primarily based on licensing patents for 2G, 3G, and 4G devices, and the IEEE802 standard, rather than the manufacture of products.<sup>71</sup> In September 2009, IDC joined an SSO, the European Telecommunications Standards Institute (ETSI), and committed to licensing its SEPs on FRAND terms.<sup>72</sup> IDC also owns SEPs in China’s wireless communications standards (WCDMA, CDMA2000, and TD-SCDMA standards).<sup>73</sup> Since

66. Peter Yu, *The First Decade of TRIPs in China*, in CHINA AND GLOBAL TRADE GOVERNANCE: CHINA’S FIRST DECADE IN THE WORLD TRADE ORGANIZATION 126, 131–32 (Zeng Ka & Wei Liang eds., 2014).

67. See, e.g., Adam Pasick, *The World’s Third-Largest Smartphone Maker Is Weirdly Cagey About Its Progress Outside of China*, QUARTZ (July 29, 2014), <http://qz.com/241746/the-worlds-third-largest-smartphone-maker-is-weirdly-cagey-about-its-progress-outside-of-china/> [<https://perma.cc/98EB-EMX4>]; Andrew Stevens, *China’s Silicon Valley*, CNN (Sept. 23, 2016), <http://money.cnn.com/2016/05/20/technology/china-tech-huawei-campus-life/> [<https://perma.cc/9GC5-66HR>].

68. *Huawei*, WIKIPEDIA, <https://en.wikipedia.org/w/index.php?title=Huawei&oldid=700203172> [<https://perma.cc/77SZ-J8UD>] (last visited Jan. 17, 2016).

69. It should be noted that there were four defendants in this case: InterDigital Communications, Inc.; InterDigital Technology Corporation; InterDigital Patent Holdings Inc.; and IPR Licensing Inc., which are affiliated with one another. In this Article, following the term used in the *Huawei* decision, I use “IDC” to denote all four of these defendants. See *Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi* (华为技术有限公司诉交互数字通信有限公司) ([*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People’s Ct. 2013) (China)).

70. NPEs or patent assertion entities (PAEs) are companies that profit from asserting patents without making or selling products. See, e.g., John R. Allison et al., *Our Divided Patent System*, 82 U. CHI. L. REV. 1073, 1129 (2015); Christopher A. Cotropia et al., *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. 649, 650 (2014); Stefania Fusco, *Markets and Patent Enforcement: A Comparative Investigation of Non-Practicing Entities in the United States and Europe*, 20 MICH. TELECOMM. & TECH. L. REV. 439, 443–44 (2014); Camilla A. Hrды, *Commercialization Awards*, 2015 WIS. L. REV. 13, 35 (2015); Eric Rogers & Young Jeon, *Inhibiting Patent Trolling: A New Approach for Applying Rule 11*, 12 NW. J. TECH. & INTELL. PROP. 291, 293 (2014); Aria Soroudi, *Defeating Trolls: The Impact of Octane and Highmar on Patent Trolls*, 35 LOY. L.A. ENT. L. REV. 319, 320 (2015).

71. See 2013 Yue Gao Fa Min San Zhong Zi No. 305.

72. *Id.*

73. *Id.*

November 2008, Huawei has had several negotiations with IDC regarding the license royalties for those SEPs.<sup>74</sup>

IDC first sued Huawei and other telecommunications companies, including Nokia and ZTE, in the US Federal District Court of Delaware and the International Trade Commission (ITC) in 2011 and 2012, claiming infringement of its 3G telecom patents.<sup>75</sup> In addition to damages claims, IDC sought not only preliminary and permanent injunctions from the district court but also exclusion orders from ITC against Huawei.<sup>76</sup> In December 2011, Huawei, in turn, filed two lawsuits against IDC in the Shenzhen Intermediate People's Court.<sup>77</sup> In the first lawsuit, Huawei alleged that IDC had been abusing its dominant market position through a number of unlawful practices, such as differentiated pricing, tying-in, and refusal to deal.<sup>78</sup> Huawei claimed damages of 20 million Renminbi (RMB).<sup>79</sup> In the second case, Huawei sued IDC for violating its FRAND obligations.<sup>80</sup> The first case was primarily associated with China's Anti-Monopoly Law, whereas the second dealt with a more fundamental issue regarding the legal mechanism to enforce FRAND commitment and judicial determinations of the FRAND rate, which are the focus of this Article.

The Shenzhen Intermediate People's Court ruled on February 4, 2013, that IDC had violated its FRAND obligations and that the licensing rate paid by Huawei for IDC's 2G, 3G, and 4G SEPs should not exceed 0.019 percent of the actual sales prices of Huawei's wireless devices.<sup>81</sup> Then both Huawei and IDC appealed to the Guangdong High

74. See, e.g., Zhang & Zhang, *supra* note 17.

75. US patent numbers 7349540, 7502406, 7536013, 7616070, 7706332, 7706830, and 7970127. See 2013 Yue Gao Fa Min San Zhong Zi No. 305. On December 19, 2013, ITC ruled that IDC's alleged patents are either invalid or not infringed. See *Certain Wireless Devices with 3G Capabilities and Components Thereof*, Inv. No. 337-TA-800, (Dec. 19, 2013) (Notice), [http://usitc.gov/secretary/fed\\_reg\\_notices/337/337\\_800\\_notice12192013sgl.pdf](http://usitc.gov/secretary/fed_reg_notices/337/337_800_notice12192013sgl.pdf) [<https://perma.cc/TK3C-YUWM>].

76. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

77. See CPI, *Huawei v. InterDigital: China at the Crossroads of Antitrust and Intellectual Property, Competition and Innovation*, COMPETITION POLY INT'L (Dec. 3, 2013) <https://www.competitionpolicyinternational.com/huawei-v-interdigital-china-at-the-crossroads-of-antitrust-and-intellectual-property-competition-and-innovation/> [<https://perma.cc/RL8L-SBKR>].

78. Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2011 Shen Zhong Fa Zhi Min Chu Zi No. 858 (Shenzhen Interm. People's Ct. 2011) (China).

79. *Id.*

80. Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2011 Shen Zhong Fa Zhi Min Chu Zi No. 857 (Shenzhen Interm. People's Ct. 2011) (China).

81. See CPI, *supra* note 77.

People's Court (the "*Huawei* court").<sup>82</sup> On October 16, 2013, the Guangdong High People's Court upheld the Shenzhen Intermediate People's Court's decision regarding IDC's violation of its FRAND obligation and the determination of the licensing rate as 0.019 percent.<sup>83</sup> This *Huawei* decision is of great importance to understand judicial practices with regard to FRAND-encumbered SEPs in China.

The *Huawei* decision was not published until April 2014.<sup>84</sup> Before the decision was published, relevant scholarly analysis could only be based on secondary sources, such as papers written by the judges sitting in the *Huawei* court and IDC's SEC filings.<sup>85</sup> As to the other interrelated case associated with Anti-Monopoly Law, both the Shenzhen Intermediate People's Court and the Guangdong High People's Court applied Article 50 of the Anti-Monopoly Law and decided that IDC should be liable for the damages in the amount of RMB 20 million because IDC's monopolistic conduct caused Huawei to suffer such loss.<sup>86</sup>

**Table 1: *Huawei v. IDC* Cases**

Claims	Abuse of Dominant Market Positions	Violation of FRAND commitment and Determination of FRAND Rate
First Instance: Shenzhen Intermediate People's Court	Shen Zhong Fa Zhi Min Chu Zi No. 858 (2011)	Shen Zhong Fa Zhi Min Chu Zi No. 857 (2011)
Second Instance: Guangdong High People's Court	Yue Gao Fa Min San Zhong Zi No. 306 (2013)	Yue Gao Fa Min San Zhong Zi No. 305 (2013)

82. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (*Huawei v. IDC*)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

83. *Id.*

84. Wong-Ervin, *supra* note 9, at 11 (noting the April 2014 decision was not published in full due to IDC's trade secret concerns).

85. *See, e.g.*, Sokol & Zheng, *FRAND in China*, *supra* note 12, at 88.

86. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (*Huawei v. IDC*)], 2013 Yue Gao Fa Min San Zhong Zi No. 306 (Guangdong High People's Ct. 2013) (China). Evidence of IDC's abuse of its dominant position can be drawn from the fact that it requested excessive royalties from Huawei and demanded that Huawei and its affiliated companies provide free patent cross-licenses globally. *Id.*

To solve these issues, it was necessary for the Shenzhen Intermediate People's Court and the Guangdong High Court to answer a series of legal questions. First, the courts had to decide whether they had jurisdiction over a dispute concerning foreign owners of SEPs and a commitment made to a foreign SSO.<sup>87</sup> The courts also needed to decide whether Chinese law should be applied when the subject SSO's Intellectual Property Policy refers to French law.<sup>88</sup> In substance, the courts had to find a correct legal basis for IDC's FRAND obligation.<sup>89</sup> The most difficult part was then whether (and, if so, how) IDC breached its FRAND commitment, and how the court could determine an appropriate FRAND rate.<sup>90</sup> This Article primarily focuses on the substantive legal issues underlying Huawei's complaint regarding IDC's FRAND obligations and the determination of the FRAND rate for SEPs.

#### IV. ESTABLISHING THE FRAND OBLIGATION UNDER CHINESE LAW

Jurisdictions may have quite different approaches to the legal effect of a FRAND commitment.<sup>91</sup> One of the notable issues in *Huawei* is the determination of an appropriate legal basis for Huawei to claim a FRAND rate against IDC. In all cases involving FRAND and SEPs, standard implementers need to find an enforcement mechanism to hold SEP holders to their obligation to license such patents under FRAND terms. In this case, IDC argued that its FRAND commitment was just an invitation for license negotiation, rather than an obligation to form the contractual relationship.<sup>92</sup> As such, IDC denied any legally binding bases for FRAND and contended that the courts could not create the contractual relationship between the two parties.<sup>93</sup> Huawei, on the other hand, insisted that IDC was obliged to license its SEPs under FRAND terms, regardless of whether that was based on contract, their FRAND commitment, or the doctrine of fairness and good faith in Chinese law.<sup>94</sup> The courts, therefore, had to look into all these claims

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87. *See id.*

88. *Id.*

89. *Id.*

90. *Id.*

91. Kesan & Hayes, *supra* note 1, at 233.

92. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

93. *Id.*

94. *Id.*



and explore whether there was an appropriate legal basis for SEP holders' FRAND commitments in China.<sup>95</sup>

### A. Contract Between SEP Holders and Implementers

Some scholars attempt to view a FRAND commitment as an implied license to all implementers so that patent holders have “a contractual claim for royalty, not a cause of action for patent infringement that might result in an injunction, treble damages, and attorneys’ fees.”<sup>96</sup> Chinese IP scholar Cui Guobin likewise suggests that it is possible that IDC and Huawei had already entered into a license agreement before negotiation.<sup>97</sup> He interprets IDC’s FRAND commitment to ETSI as an offer, and Huawei could accept the offer by notifying IDC of its plan to implement the subject standard.<sup>98</sup> In this way, Huawei could claim the FRAND rate against IDC based on their contract. The recognition of a license agreement between Huawei and IDC may be based on the opinion of the Supreme People’s Court expressed in an official reply to a lower court:

In view of the actual situation that the standard-setting body in China has not established relevant rules on the public disclosure and use of patent information in a relevant standard, if a patentee has participated in setting a standard or has agreed to include its patent into a state, industry, or local standard, it shall be deemed that the patentee has permitted others to exploit such a patent while implementing the standard. Therefore, exploitation of the subject matter by others shall not constitute infringement prescribed in Article 11 of the Patent Law. The patentee may require the entity exploiting the patent to pay a royalty, which, nonetheless, shall be obviously less than a normal royalty.<sup>99</sup>

This opinion only allows patentees to charge implementers “a royalty . . . obviously less than a normal royalty.”<sup>100</sup> Because such a royalty is not reasonable, fair, and non-discriminatory, it can hardly be viewed as a FRAND royalty. It should be noted that a FRAND rate is normally determined from a hypothetical voluntary transaction;<sup>101</sup> therefore, a royalty rate obviously less than a normal one cannot be a FRAND rate. This Supreme People’s Court opinion reflects the government’s favoring of standard implementers and a policy against

95. Zhong Lun Law Firm, *Seeking Injunctions for Standard Essential Patents in China*, LEXOLOGY (Mar. 3, 2016), <http://www.lexology.com/library/detail.aspx?g=d2c6e034-3544-4b6e-bb29-55be99235ffe> [<https://perma.cc/9FDT-68UV>].

96. See, e.g., Lemley, *supra* note 23, at 1925.

97. Cui Guobin, *Standard-Essential Patents and Injunctive Relief*, in PATENT LAW IN GREATER CHINA 340, 347 (Stefan Luginbuehl & Pater Ganea eds., 2014).

98. *Id.* at 348–49.

99. *Letter of the Supreme People’s Court*, PKULAW.CN, <http://en.pkulaw.cn/display.aspx?cgid=110288&lib=law> [<https://perma.cc/BNB5-S68E>] (last visited Oct. 17, 2016).

100. *Id.*

101. See, e.g., Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1146.

fair compensation for SEP holders.<sup>102</sup> In addition, in this reply, the Supreme People's Court stated that "it shall be deemed that the patentee has permitted others to exploit such a patent" and "[t]he patentee may require the entity exploiting the patent to pay a royalty."<sup>103</sup> Although the People's Supreme Court did not explicitly state that there is a licensing agreement between the patentee and the standard implementer, it seems to suggest that such an agreement does exist because the "patentee has permitted," and "the entity exploiting the patent" is, therefore, obliged to pay, the royalty.<sup>104</sup> Such an interpretation conflicted with a widely accepted principle that SEP holders' FRAND commitments to an SSO are just promises to license to other members, rather than licenses themselves.<sup>105</sup> As a FRAND pledge does not include a specific license fee or royalty rate, it cannot be an offer made by SEP holders.<sup>106</sup> For example, a Dutch court made it clear in a 2012 decision that a SEP holder's FRAND commitment to SSOs does not constitute a license between the SEP holder and standard implementers.<sup>107</sup> Similarly, in *Huawei*, both first-instance and second-instance courts ruled out the possibility that Huawei requested a FRAND licensing rate based on its contract with IDC.<sup>108</sup> The courts stated that there was no contractual relationship between Huawei and IDC, and such a relationship would only be formed after they reached a consensus over the license rates and other licensing terms.<sup>109</sup> In other words, there was no contractual basis for Huawei to claim a FRAND licensing rate against IDC.

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102. Such a policy can also be observed in SAC's regulations for national standards. Article 9 of the "Regulations on Administration of Formulating and Revising National Standards Involving Patents" stipulates that "a national standard cannot include any patented technology unless the patent holder agrees to grant licenses with royalties considerably lower than the customary license fee or with no royalties at all." See Taplin, *supra* note 60, at 6.

103. *Letter of the Supreme People's Court*, *supra* note 101.

104. *Id.* It should be pointed out that this reply concerned a case where the patent owner had not made a FRAND commitment to the SSO. See Li Zhongsheng & Lei Peng, *The Anti-Monopoly Risks of Asserting Standard Essential Patents in China*, KING & WOOD MALLESONS (Aug. 18, 2015), <http://www.kwm.com/en/cn/knowledge/insights/standard-essential-patent-of-antitrust-risk-analysis-20150818> [<https://perma.cc/ENB3-M3AM>].

105. See, e.g., Kesan & Hayes, *supra* note 1, at 260; Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1140–41; Lim, *Standard Essential Patent*, *supra* note 1, at 29.

106. Schellekens, *supra* note 32, at 239.

107. Cotter, *supra* note 3, at 318.

108. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

109. *Id.*

### B. Contract with Third-Party Beneficiary

The other option for enforcing FRAND commitment is to define IDC's agreement with ETSI as a contract with a third-party beneficiary.<sup>110</sup> Put more clearly, this approach suggests that IDC entered into a binding contractual commitment with ETSI, agreeing to license its SEPs on FRAND terms,<sup>111</sup> and Huawei is a third-party beneficiary of IDC's commitments to ETSI.<sup>112</sup> A contract with a third-party beneficiary has been common practice to cope with FRAND-encumbered SEPs in the United States.<sup>113</sup> Two court decisions in the United States provide examples of this approach.<sup>114</sup> In *Microsoft v. Motorola*,<sup>115</sup> the US court held that Microsoft was a third-party beneficiary of Motorola's FRAND commitments to the Institute of Electrical and Electronics Engineers (IEEE) and ETSI, which were enforceable contracts. Therefore, Microsoft was entitled to sue for breach of the FRAND contract.<sup>116</sup> As the district court's Judge Robart explained: "[The FRAND] commitments are clearly designed to benefit potential licensees of Motorola's standard essential patent by ensuring that such patents are readily accessible to everybody at reasonable rates."<sup>117</sup> The court thus rejected Motorola's statement that the IEEE and International Telecommunications Union (ITU) commitments were merely unilateral offers to negotiate reasonable and non-discriminatory (RAND) licenses.<sup>118</sup> Motorola was, therefore, obliged to grant Microsoft a FRAND license, not permitted merely "to engage in bilateral, good-

110. Cui, *supra* note 98, at 349.

111. The contractual nature of FRAND commitment has been recognized by numerous court decisions and academic articles in the United States. *See, e.g.*, *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 878 (9th Cir. 2012); *Research in Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 797 (N.D. Tex. 2008), *Ericsson, Inc. v. Samsung Elecs. Co.*, No. 2:06-CV-63, 2007 WL 1202728, at \*1 (E.D. Tex. Apr. 20, 2007); *Cotter, supra* note 3, at 313, 315–19; *Keele, supra* note 35, at 194–96; *Lemley & Shapiro, Setting Reasonable Royalties, supra* note 7, at 1141; *Mark A. Lemley, Ten Things to Do About Patent Holdup of Standards (And One Not To)*, 48 B.C. L. REV. 149, 155–58 (2007); *Ragavan et al., supra* note 26, at 93–94; *Ratliff & Rubinfeld, supra* note 3333, at 4; *supra* note 2626 *Sidak, supra* note 36, at 210; *Sternberg, supra* note 8, at 225.

112. Yang Li & Nari Lee, *European Standards in Chinese Courts – A Case of SEP and FRAND disputes in China*, in *GOVERNANCE OF INTELLECTUAL PROPERTY RIGHTS IN CHINA AND EUROPE* 281 (Nari Lee, Niklas Brunn & Mingde Le eds., 2016).

113. *See, e.g.*, *Contreras, Market Reliance Theory, supra* note 28, at 483–84; *Ragavan et al., supra* note 26, at 98–99.

114. *Microsoft Corp. v. Motorola, Inc.*, 864 F. Supp. 2d 1023, 1033 (W.D. Wash. 2012); *Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1083 (W.D. Wis. 2012).

115. *Microsoft*, 864 F. Supp. 2d at 1033.

116. *Id.*

117. *Id.*

118. *Id.* at 1032.

faith negotiations leading to [F]RAND terms.”<sup>119</sup> In *Apple, Inc. v. Motorola Mobility, Inc.*,<sup>120</sup> Judge Crabb similarly concluded that, by committing to FRAND terms to ETSI and IEEE, Motorola had made a contractual commitment to license its SEPs on FRAND terms to third-party beneficiaries, including Apple. If the SEP holder’s FRAND commitment constitutes a binding contract, then it becomes crucial for the court to carefully read the language of SSOs’ Intellectual Property Right policies so that it can determine what an SEP holder’s FRAND obligations are.

According to Chinese contract law, parties may agree that one party shall perform its obligation to a third party.<sup>121</sup> Based on the majority and authoritative interpretation of Chinese contract law, a third party can claim the contractual right against the obligor although it is not a contracting party<sup>122</sup> and although the third party’s right is not independent from the original contracting parties.<sup>123</sup> In *Huawei*, some Chinese scholars suggest that, although the contractual relation took place between ETSI and IDC, Huawei, as a third-party beneficiary, could still request a FRAND rate from IDC.<sup>124</sup> However, China derived its civil law, including contract law, from the German system.<sup>125</sup> Therefore, the way that German courts and scholars interpret contract law has a significant impact on Chinese contract law.<sup>126</sup> In Germany,

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119. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2012 WL 4827743, at \*6 (W.D. Wash. Oct. 10, 2012).

120. *Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1085 (W.D. Wis. 2012).

121. Contract Law of the People’s Republic of China (promulgated by Nat’l People’s Cong., Mar. 15, 1999), art. 64, 1999 P.R.C. CONTRACT LAW (China) (“Where the parties prescribed that the obligor render performance to a third person, if the obligor fails to render its performance to the third person, or rendered non-conforming performance, it shall be liable to the obligee for breach of contract.”).

122. See, e.g., MO ZHANG, CHINESE CONTRACT LAW: THEORY AND PRACTICE 319 (2006); Cui, *supra* note 99, at 350–51.

123. See, e.g., Hector L. MacQueen, *Third Party Rights in Contract: A Case Study on Codifying and Not Codifying*, in TOWARD A CHINESE CIVIL CODE: COMPARATIVE AND HISTORICAL PERSPECTIVE 307, 324 (Lei Chen & C.H. (Remco) van Rhee eds., 2012).

124. Cui, *supra* note 98, at 349–50.

125. See, e.g., 3 ZHU JINGWEN & HAN DAYUAN, RESEARCH REPORT ON THE SOCIALIST LEGAL SYSTEM WITH CHINESE CHARACTERISTICS, 51 (2013); ZHANG XIAOYANG, CHINESE CIVIL LAW FOR BUSINESSES 21, 30 (2013); ZHANG, *supra* note 124, at xi; Tianshu Zhou & Mathias Siems, *Contentious Modes of Understanding Chinese Commercial Law*, 6 GEO. MASON J. INT’L COM. L. 177, 179–80 (2015).

126. See, e.g., Jianlin Chen, *Challenges in Designing Public Procurement Linkages: A Case Study of SMES Preference in China’s Government Procurement*, 30 UCLA PAC. BASIN L.J. 149, 179 (2013) (stating that the applicability of Contract Law to government procurement in China reflects the German approach); Perry Keller, *Sources of Order in Chinese Law*, 42 AM. J. COMP. L. 711, 718–19 (1994) (noting how Chinese jurists understand formal law via German legal system); Wang Liming, *An Inquiry into Several Difficult Problems in Enacting China’s Uniform Contract Law*, 8 PAC. RIM L. & POL’Y J. 351, 354–55, 385 (1999) (exemplifying how a Chinese civil law and contract law scholar analyzed Chinese law via German approach).

the courts have made it clear that SEP holders' FRAND commitments do not grant other SSO members a right to obtain a license, and the FRAND commitment is nothing but an invitation for third parties to make offers.<sup>127</sup> In *Huawei*, IDC also cited a German court decision to dissuade the court from holding that Huawei was a third-party beneficiary to the contract between IDC and ETSI.<sup>128</sup> While the *Huawei* court did not view Huawei as a third-party beneficiary, it did not explain that decision.<sup>129</sup> One possible explanation is that in Chinese contract law, contracting parties cannot impose any obligation on the third and a third-party beneficiary will obtain purely benefit without any obligation. The third party only receives obligor's performance and is not subject to any contractual obligation.<sup>130</sup> However, in the SEPs scenario, standard implementers still need to pay SEP holders a royalty based on FRAND terms. Therefore, such an arrangement cannot be a contract with a third-party beneficiary under Chinese law.

### C. Doctrines of Fairness and Good Faith

As there are some legislative ambiguities in third-party beneficiary provisions in Chinese Contract Law, some researchers have suggested that the application of the good faith doctrine may fill the loopholes.<sup>131</sup> The *Huawei* court eventually ruled that the legal basis for Huawei to request that IDC provide a FRAND rate was the doctrine of fairness and good faith prescribed in the General Principles of Civil Law and Chinese Contract Law.<sup>132</sup> The court also identified three statutes from these two bodies of law as the legal basis for Huawei's FRAND claim against IDC:<sup>133</sup>

- (1) Article 4 of the General Principles of Civil Law: "In civil activities, the principles of voluntariness, fairness, consideration for equal value, and good faith shall be observed."<sup>134</sup>

127. Cotter, *supra* note 3, at 318.

128. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

129. *Id.*

130. Contract Law of the People's Republic of China (promulgated by Nat'l People's Cong., Mar. 15, 1999), art. 64, 1999 P.R.C. CONTRACT LAW (China).

131. *See, e.g.,* MacQueen, *supra* note 124, at 324–25.

132. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

133. *Id.*

134. General Principles of the Civil Law of the People's Republic of China (promulgated by the Nat'l People's Cong., Apr. 12, 1986), art. 4, 1986 P.R.C. CIVIL AND COMMERCIAL LAWS (China).

- (2) Article 5 of the Chinese Contract Law: “The parties shall observe the principle of fairness in defining each other’s rights and obligations.”<sup>135</sup>
- (3) Article 6 of the Chinese Contract Law: “The parties shall observe the principle of good faith in exercising their rights and fulfilling their obligations.”<sup>136</sup>

These three articles lay out fundamental principles for all civil and commercial activities in China. The *Huawei* court ruled that IDC’s FRAND obligation to Huawei could be established by applying the three Articles to construct the scope and effect of IDC’s FRAND commitment.<sup>137</sup> It is not surprising that the *Huawei* court applied the General Principles of Civil Law and Chinese Contract Law to solve the issues surrounding FRAND-encumbered patents because intellectual property (IP) laws in China have always been viewed as part of the civil law system, and relevant civil code can, therefore, be applied to IP disputes.<sup>138</sup> In addition, the *Huawei* dispute originated from IDC’s contracts with SSOs.<sup>139</sup> As in most civil law countries, fairness and, especially, good faith are overriding principles that govern all private activities in China.<sup>140</sup> “Good faith” in Chinese refers to “honesty” (*chengshi*) and “faithfulness” (*xinyong*).<sup>141</sup> It implies the reasonable expectations of the parties, a proper balance of different interests, and the reasonable commercial standard for fair dealing.<sup>142</sup> The implementation of this principle requires parties to ensure fairness in civil activities and to avert the abuse of rights.<sup>143</sup> Therefore, Chinese scholars view the principle of fairness as “subsumed under the principle

135. Contract Law of the People’s Republic of China (promulgated by Nat’l People’s Cong., Mar. 15, 1999), art. 5, 1999 P.R.C. CONTRACT LAW (China).

136. Contract Law of the People’s Republic of China (promulgated by Nat’l People’s Cong., Mar. 15, 1999), art. 6, 1999 P.R.C. CONTRACT LAW (China).

137. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

138. See, e.g., Liming Wang, *The Systematization of the Chinese Civil Code*, in TOWARD A CHINESE CIVIL CODE: COMPARATIVE AND HISTORICAL PERSPECTIVE 21, 27 (Lei Chen & C.H. (Remco) van Rhee eds., 2012).

139. See *supra* notes 71–73 and accompanying text.

140. See, e.g., EJAN MACKAAY, LAW AND ECONOMICS FOR CIVIL LAW SYSTEMS 432–33 (2013); ZHANG, *supra* note 123, at 75–76; ZHU & HAN, *supra* note 126, at 17; REINHARD ZIMMERMANN & SIMON WHITTAKER, GOOD FAITH IN EUROPEAN CONTRACT LAW 49–56 (2000); Chunlin Leonhard, *A Legal Chameleon: An Examination of the Doctrine of Good Faith in Chinese and American Contract Law*, 25 CONN. J. INT’L L. 305, 306 (2010); Wang Liming & Xu Chuanxi, *Fundamental Principles of China’s Contract Law*, 13 COLUM. J. ASIAN L. 1, 16 (1999); Saul Litvinoff, *Good Faith*, 71 TUL. L. REV. 1645, 1646–47, 1655 (1997).

141. See, e.g., LING, *supra* note 19, at 52; ZHANG, *supra* note 127, at 26.

142. See, e.g., LING, *supra* note 19, at 54.

143. See, e.g., Hui Zheng, *Overview*, in CHINESE CIVIL LAW 1, 5 (Yuanshi Bu ed., 2013).

of good faith.”<sup>144</sup> Moreover, FRAND rightfully echoes the principle of fairness in Chinese law as fairness is an essential component of a FRAND commitment.

Chinese scholars and courts have viewed the doctrine of good faith as the “highest guiding principle,” “imperial principle,” or “royal principle” for the law of obligation.<sup>145</sup> Chinese courts tend to use the doctrine as a catchall tool to solve all civil law and contract-related issues.<sup>146</sup> The doctrine has been used to fill the legislative loopholes in all stages of a potential contractual relationship, including pre-contract formation, performance, modification, termination, and post-termination.<sup>147</sup>

### 1. Promise at the Pre-Contract Phase

Because the *Huawei* court ruled out the possibility of a license agreement between Huawei and IDC during their negotiations, it needed to investigate whether IDC had the FRAND duty without a license agreement with Huawei. In such a scenario, SEP holders’ previous FRAND commitments with SSOs should be an important factor to be considered in the application of the good faith doctrine. As the Chinese courts have widely adopted this doctrine to hold parties liable during the pre-contract phase<sup>148</sup> and to validate the binding effect of previous promises,<sup>149</sup> it is quite natural and logical for the *Huawei* court to hold IDC obliged to license on FRAND terms based on the doctrine of good faith. Although the *Huawei* court did not specify, based on the doctrine of good faith, the duty that IDC as a SEP holder owed to a standard implementer, it is generally accepted in China that parties during the negotiation stage should bear the duties of loyalty,

144. See, e.g., LING, *supra* note 19, at 50.

145. See, e.g., *id.* at 50, 52; Leonhard, *supra* note 141, at 309. Sometimes good faith is termed as “honesty and credibility” or “honesty and faithfulness” in Chinese. See, e.g., LING, *supra* note 19, at 52; ZHANG, *supra* note 123, at 76. Some researchers use the term “principle of integrity” to denote the good faith principle. See, e.g., ZHU & HAN, *supra* note 127, at 17.

146. See, e.g., Leonhard, *supra* note 140, at 316–17; see also POTTER, *supra* note 20, at 43 (describing the principles of honesty and good faith as part of the gap-filling provisions); ZHANG, *supra* note 123, at 26 (“in the context of [the good faith] doctrine that judges construe the law, especially when legal vacua require the interpretation of the law pursuant to the spirit of good faith”); ZHU & HAN, *supra* note 126, at 17 (stating that the principle of good faith or integrity “can plug loopholes and realize the creativity and flexibility of judicial activities”).

147. See, e.g., ZHANG, *supra* note 123, at 76–77; Leonhard, *supra* note 141, at 308, 310–11, 317; Wang & Xu, *supra* note 141, at 17–21.

148. See, e.g., LING, *supra* note 19, at 50; Leonhard, *supra* note 140, at 317–18; see also Cotter, *supra* note 3, at 326 (introducing the opinion of the Tokyo District Court, which held that based on the good faith doctrine, Apple and Samsung should negotiate with good faith for FRAND rate).

149. See, e.g., LING, *supra* note 19, at 56.

honesty, non-deception, confidentiality, and, most importantly, duty to keep promises.<sup>150</sup> If the court viewed IDC's offer as excessively high, it could rule that the company violated good faith doctrine by breaking its FRAND promise.

From a comparative perspective, some US scholars have proposed to establish a mechanism to enforce FRAND commitments based on promissory or equitable estoppel doctrine. This would similarly require the patent holder's promise or statement and the standard adopter's reliance.<sup>151</sup> These proposals, however, were not adopted by the US courts. Promissory estoppel is the American common law approach to deciding whether to impose precontractual liability in the absence of an agreement.<sup>152</sup> Nonetheless, the concept of estoppel does not exist in China and other civil law systems.<sup>153</sup> Therefore, experiences from other civil law jurisdictions are noteworthy for the discussion of FRAND enforcement in China, especially with the view whether they similarly apply the doctrine of good faith in FRAND disputes. The Tokyo District Court in Japan, whose civil law jurisdiction has had a huge influence on the Chinese private law regime,<sup>154</sup> once recognized that the principle of good faith should be applied to parties engaging in contract negotiations, including those

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150. See, e.g., Wang & Xu, *supra* note 140, at 17–19; see also Funing Huang, *Formation and Validity of Contracts*, in CHINESE CIVIL LAW 37, 48 (Yuanshi Bu ed., 2013) (explaining that pre-contractual duties based on the principle of good faith include negotiating in good faith and the duty of cooperation); ZHANG, *supra* note 123, at 85 (introducing the pre-contractual liability based on the principle of good faith in China). In some other jurisdictions, courts will also hold parties liable if the party “breaks off negotiations in a manner contrary to precontractual good faith.” See Martijn W. Hesselink, *The Concept of Good Faith*, in TOWARD A EUROPEAN CIVIL CODE 471, 479 (Ewoud Hondius ed., 3d ed. 2004).

151. See, e.g., Contreras, *Market Reliance Theory*, *supra* note 28, at 516–17, 521–23; Kesan & Hayes, *supra* note 1, at 263–64; Lemley, *supra* note 23, at 1918; Sidak, *supra* note 36, at 223–24.

152. See, e.g., Nadia E. Nedzel, *A Comparative Study of Good Faith, Fair Dealing, and Precontractual Liability*, 12 TUL. EUR. & CIV. L.F. 97, 128–36 (1997).

153. See, e.g., David V. Snyder, *Comparative Law in Action: Promissory Estoppel, the Civil Law, and the Mixed Jurisdiction*, 15 ARIZ. J. INT'L & COMP. L. 695, 695 (1998); see also Rodrigo Novoa, Note, *Culpa in Contrahendo: A Comparative Law Study: Chilean Law and the United Nations Convention on Contracts for the International Sale of Goods (CISG)*, 22 ARIZ. J. INT'L & COMP. L. 583, 592 (2005) (“In a civil law system, the duty to bargain in good faith is unanimously recognized either by statutory law or as a general principle of law as pre-contractual obligation. But in a common law system, this duty is not generally acknowledged. Some courts and scholars have recognized it as a general principle of law, but others have only accepted it as a contractual obligation or under the theory of promissory estoppel.”).

154. See, e.g., ZHANG, *supra* note 123, at xi; see also Jan Krauß, *Equitable Doctrines in International Patent Laws*, in INTELLECTUAL PROPERTY IN COMMON LAW AND CIVIL LAW 99–100, 116, 117 (Toshiko Takenaka ed., 2013) (indicating that civil law jurisdictions use “general clauses,” such as good faith, to cope with equity issues, and that enforcement of a patent under German law is limited by the doctrine of good faith, which is perceived as a doctrine of equity).



involving FRAND-encumbered SEPs.<sup>155</sup> The Tokyo District Court, therefore, ruled that SEP holders should honestly disclose appropriate information to substantiate their offers upon the request of standard implementers.<sup>156</sup>

## 2. Abuse of Legal Right

The good faith doctrine is applied to curb the abuse of legal rights as well.<sup>157</sup> In the context of FRAND-encumbered SEPs, patentees are sometimes viewed as abusing their patent rights at the expense of standard implementers.<sup>158</sup> Such abuse of right is occasionally found when a SEP holder who previously made a FRAND commitment seeks an injunction against the implementer.<sup>159</sup> As a FRAND commitment, by its nature, is a promise not to exercise the full scope of patent rights in exchange for the standard adoption,<sup>160</sup> the enforcement of SEPs by injunction or litigation, especially during negotiations, may constitute an abuse of rights. From a comparative perspective, the Ninth Circuit in *Microsoft* viewed the FRAND commitment as the SEP holders' implicit waiver of injunctive relief and reached a conclusion similar to *Huawei* that they are not allowed to seek injunctions against standard implementers.<sup>161</sup>

SEP holders such as IDC, on the other hand, may always argue that based on freedom of contract, they should have freedom to enter into a license agreement, the freedom to choose with whom to sign the

155. See, e.g., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 48.5d1 n.191.1 (2016) (citing Tokyo district court cases); Cotter, *Standard-Essential Patents*, *supra* note 3, at 325–26; Nakayama & Tamura, *supra* note 50, at 286.

156. Cotter, *supra* note 3, at 326.

157. See, e.g., LING, *supra* note 19, at 50; ZHU & HAN, *supra* note 125, at 17; Hui Zheng, *Overview*, in CHINESE CIVIL LAW 1, 5 (Yuanshi Bu ed., 2013).

158. Cotter, *supra* note 3, at 324–26.

159. See, e.g., Steven Anderman, *A Comparative Law Perspective II: The Relationship Between Patents and Competition Rules*, in THE UNITARY EU PATENT SYSTEM 143 (Justine Pila & Christopher Wadlow eds., 2015); Nakayama & Tamura, *supra* note 50, at 285; see also Alison Jones, *Standard-Essential Patents: FRAND Commitments, Injunctions and the Smartphone Wars*, 10 EUR. COMPETITION J. 1, 10–13 (2014) (noting that courts in Netherlands, Italy, and France declined to grant injunctions to SEPs holders; whereas the German courts are more likely to grant such injunctions).

160. See, e.g., Lemley & Shapiro, *supra* note 7, at 1140.

161. *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 884 (9th Cir. 2012) (“Implicit in such a sweeping promise is ... a guarantee that the patent-holder will not take steps to keep would-be users from using the patented material, such as seeking an injunction, but will instead proffer licenses consistent with the commitment made.”); see also Sternberg, *supra* note 8, at 225 (interpreting FRAND obligation as a “waiver of a party’s rights to . . . injunctions and treble damages). *But see* Lim, *Standard Essential Patent*, *supra* note 1, at 60 (criticizing Ninth Circuit’s opinion and stating that “the idea that the right to injunctive relief extinguished every time a SEP is at issue is a step too far”); Sternberg, *supra* note 8, at 242 (“[A] [F]RAND obligation should not foreclose the possibility of an injunction”).

license agreement, and the freedom to decide the content and form of a license agreement.<sup>162</sup> However, the freedom of contract is limited by the principle of good faith<sup>163</sup> because of policy concerns arising from asymmetric bargaining power or unfair clauses.<sup>164</sup> Additionally, technical standard and FRAND-encumbered SEPs involve not only the private interests of both parties but also the public interest.<sup>165</sup> The principle of good faith in China was designed precisely to balance the interests of the parties and society.<sup>166</sup> Therefore, a FRAND violation may be an appropriate case in which to apply the doctrine of good faith.

### 3. Good Faith in Civil Law and Common Law Jurisdictions

The good faith doctrine also has its place in the US common law system.<sup>167</sup> However, compared to the widely adopted good faith doctrine in Chinese law, the application of good faith in US law is much more limited.<sup>168</sup> In the context of FRAND, good faith in the US common law needs to be implied in the contract.<sup>169</sup> In *Microsoft v. Motorola*,<sup>170</sup> the district court and the Ninth Circuit held that Motorola's dealing with Microsoft regarding enforcing a FRAND-encumbered patent violated the duty of good faith and fair dealing.<sup>171</sup> However, different from *Huawei*, which applied the good faith doctrine directly to establish IDC's FRAND obligation to the standard implementer Huawei, the district court and the Ninth Circuit first defined Microsoft as a third-party beneficiary to Motorola's contractual FRAND commitments to the IEEE and ITU.<sup>172</sup> The courts held that such contracts are subject to common law obligations of good faith and fair dealing.<sup>173</sup> Put

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162. See e.g., General Principles of the Civil Law of the People's Republic of China (promulgated by the Nat'l People' Cong., Apr. 12, 1986), 1986 P.R.C. CIVIL AND COMMERCIAL LAWS, art. 4 ("In civil activities, the principles of voluntariness, fairness, making compensation for equal value, honesty and credibility shall be observed."); Contract Law of the People's Republic of China (promulgated by Nat'l People's Cong., Mar. 15, 1999), art. 4, 1999 P.R.C. CONTRACT LAW (China) ("A party is entitled to enter into a contract voluntarily under the law, and no entity or individual may unlawfully interfere with such right."); LING, *supra* note 19, at 43; ZHANG, *supra* note 123, at 25.

163. See, e.g., LING, *supra* note 19, at 49–50.

164. See, e.g., Maud Piers, *Good Faith in English Law—Could A Rule Become A Principle?*, 26 TUL. EUR. & CIV. L.F. 123, 161–62 (2011).

165. See *supra* notes 24–29, 36–42 and accompanying text.

166. See, e.g., LING, *supra* note 19, at 53–54; ZHANG, *supra* note 123, at 76.

167. See, e.g., Leonhard, *supra* note 140, at 311–15.

168. See *id.* at 308, 313–15, 319–20.

169. See, e.g., Sidak, *supra* note 36, at 216.

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

171. *Id.* at 1030.

172. *Id.*; *Microsoft Corp. v. Motorola, Inc.*, 854 F. Supp. 2d 993, 997 (W.D. Wash. 2012);

173. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1030 (9th Cir. 2015)

differently, the duty of good faith and fair dealing was used as the standard to find a breach of contract.<sup>174</sup> The district court noted that there is no universal definition of the implied duty of good faith and fair dealing, and it is up to the jury to decide whether the duty has been breached.<sup>175</sup>

Although the common law and civil law systems have different roots for the doctrine of good faith, the courts in both systems may view the same actions as violations of the doctrine, as well as violations of the FRAND obligation. In *Microsoft*, the district court's Judge Robart instructed the jury that the breach of the good faith duty may arise from either the patentee's excessive offers, its injunctive actions to enforce a FRAND-encumbered patent, or these actions combined.<sup>176</sup> The Ninth Circuit addressed SEP-holder Motorola's "overall course of conduct,"<sup>177</sup> but focused more on the patent holder's infringement action and injunctive relief against the standard implementer in determining the breach of FRAND.<sup>178</sup> Nonetheless, some US courts have held that SEP holders' seeking injunctive relief is a breach of contract without invoking the duty of good faith and fair dealing.<sup>179</sup> Scholars Kesan and Hayes observed that the development of US case law suggests that injunctions may not be an option for patent holders to enforce SEPs.<sup>180</sup> Similarly, in a civil law jurisdiction, the Tokyo District Court held that FRAND-encumbered SEP holders' pursuit of a preliminary injunction constituted an abuse of right and thus departed from the principle of good faith.<sup>181</sup> The *Huawei* court, on the other hand, found IDC's violation of FRAND based on its infringement litigation, pursuit of injunctive relief against Huawei, and the excessive offer.<sup>182</sup> In summary, although the good faith doctrine has different implications in the common law and civil law traditions, SEP holders' seeking an

174. Verdict Form at 3, *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 5398081 (W.D. Wash. Sept. 4, 2013).

175. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 5373179, at \*5 (W.D. Wash. Sept. 24, 2013).

176. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1045 (9th Cir. 2015).

177. *Id.* at 1045.

178. *Id.* at 1046.

179. *Realtek Semiconductor Corp. v. LSI Corp.*, 946 F. Supp. 2d 998, 1008 (N.D. Cal. 2013).

180. Kesan and Hayes, *supra* note 1, at 306.

181. Cotter, *supra* note 3, at 325–26. It should also be noted that from a competition law perspective, SEP holders' seeking of injunction against implementers may be viewed as the abuse of dominant position and cause the holdup problem. See, e.g., Dana Beldiman, *Introduction: Exclusion and Inclusion—The Role of IP Laws in a Shared Knowledge Environment*, in *INNOVATION, COMPETITION AND COLLABORATION* 1, 8 (Dana Beldiman ed., 2015); TINA HART ET AL., *INTELLECTUAL PROPERTY LAW* 291 (8th ed. 2015).

182. *Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi* (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc.* (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

injunction against standard implementers is widely recognized as a violation of the FRAND obligation and the principle of good faith.

#### D. SAIC's Provisions

The State Administration for Industry and Commerce (SAIC) in China recently issued the *Provisions of the State Administration for Industry and Commerce on Prohibiting the Abuse of Intellectual Property Rights to Preclude or Restrict Competition* (关于禁止滥用知识产权排除、限制竞争行为的规定) (“*Provisions*”). These were issued on April 7, 2015, and came into effect on August 1 of the same year.<sup>183</sup> The third paragraph of Article 13 of the *Provisions* defines a SEP as a “patent which is essential to the implementation of such standard.”<sup>184</sup> More importantly, the second paragraph of the same Article may become a legal basis for standard implementers to claim FRAND terms against SEP holders in the future:

Businesses with dominant market position shall not, without justification, engage in the acts below to exclude or restrict competition in the process of setting and implementing standards:

1. . . .
2. once the subject patent becomes a standard-essential patent, [the patent holder] will violate the fair, reasonable and non-discriminatory (FRAND) principle, by precluding or restricting competition, such as refusal to license, tying products, or imposing other unreasonable terms.<sup>185</sup>

Although the violation of Article 13 constitutes an independent ground for anti-monopoly liability,<sup>186</sup> it has been made clear that SEP holders bear the FRAND duty to standard implementers. Therefore, it is possible that standard implementers will establish their FRAND claims against SEP holders based on Article 13 of the *Provisions*.

183. Provisions on Prohibiting the Abuse of Intellectual Property Rights to Preclude or Restrict Competition (promulgated by the St. Administration for Industry and Commerce, Apr. 7, 2015, Aug. 1, 2015), [http://www.kangxin.com/en/index.php?optionid=927&auto\\_id=726](http://www.kangxin.com/en/index.php?optionid=927&auto_id=726) [<https://perma.cc/JC2N-Y8XJ>] (China).

184. Provisions, art. 13.

185. *Id.*

186. Article 14 of the *Provisions* states: “Where an operator is suspected of abusing the intellectual property rights to exclude or constraint competition, the administration for industry and commerce shall perform the investigation in accordance with the Anti-monopoly Law and the Provisions of the Administrations for Industry and Commerce on the Procedures for the Investigation and Penalties of Monopoly Agreement Cases and Abuse of Dominant Market Position Cases.” Provisions, art. 14. Article 17(2) of the *Provisions* stipulates: “If an operator’s abuse of intellectual property rights to exclude or restrict competition constitutes an abuse of dominant market position, the administration for industry and commerce shall order the operator to stop the illegal act, confiscate the illegal income, and impose a fine of not less than 1% but not more than 10% of annual sales of the previous year.” Provisions, art. 17(2).

Nevertheless, it should be noted that, because the *Provisions* are designed according to Anti-Monopoly Law,<sup>187</sup> they are primarily based on antitrust and competition law concerns. Only businesses with “dominant market position” will be charged with FRAND obligations. This requirement does not exist for most of the scenarios in which SEP holders bear FRAND duties.<sup>188</sup> Moreover, the examples of FRAND violations provided in the *Provisions*, such as refusal to deal or tying arrangement, are also typical antitrust violations. It is uncertain whether SEP holders’ excessive pricing or initiating injunctive relief will fall into the scope regulated by Article 13. In this respect, Article 13 might focus only on cases that implicate anti-monopoly law concerns.

On the other hand, Article 13 of the *Provisions* may occasionally include cases beyond normal FRAND disputes, where both SEP holders and standard implementers are affiliated with the same SSO and SEP holders have made FRAND commitments to the organization concerned.<sup>189</sup> Although Article 13 does mention the standard setting process, it does not require that SEP holders have previously made any FRAND commitment, nor does it require that either the SEP holder or the standard implementer should be a member of an SSO.<sup>190</sup>

Moreover, the State Intellectual Property Office (SIPO) and the National Standardization Administration of China (SAC) recently jointly released the (*Provisional*) *Administration Regulations of National Standards Involving Patent* (国家标准涉及专利的管理规定 (暂行) (“*Provisional Regulations*”), which have been in effect since January 1, 2014.<sup>191</sup> According to Article 10 of the *Provisional Regulations*, if the patent holder refuses to license it under FRAND terms, the patent cannot be included in non-mandatory national standards.<sup>192</sup> Article 15 further stipulates that if the compulsory national standard must involve the patent whose owner refuses to license under FRAND terms, the SAC, SIPO, and relevant authorities will negotiate a solution with the holder.<sup>193</sup> However, the *Provisional Regulations* have limited purview as the subject standards must involve Chinese national

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187. “In order to protect fair market competition, encourage innovation, and stop operators from abusing intellectual property rights to exclude or restrict competition, the Provisions on the Prohibition of the Abuse of Intellectual Property Rights to Exclude or Restrict Competition (hereinafter referred to as the ‘Provisions’) are formulated in accordance with the Anti-monopoly Law of the People’s Republic of China (hereinafter referred to as the ‘Anti-monopoly Law’).” Provisions, art. 1.

188. See *supra* notes 110–58 and accompanying text.

189. See *supra* note 110.

190. Provisions, art. 13.

191. Provisions, art. 24.

192. Provisions, art. 10.

193. Provisions, art. 15.

standards.<sup>194</sup> Unlike the *Provisions* mentioned in previous paragraphs, the *Provisional Regulations* do not establish legal liability for FRAND violations, but rather provide a signal of potential government intervention into the FRAND negotiations associated with SEPs for national standards. Therefore, commentators suggest that the *Provisional Regulations* “leave a number of definitional and procedural ambiguities.”<sup>195</sup>

### E. SPC's Interpretation

On March 21, 2016, the Supreme People's Court (SPC) in China issued the *Interpretation (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases* (最高人民法院关于审理侵犯专利权纠纷案件适用法律若干问题的解释(二)) (“*Interpretation*”), which has been in effect since April 1, 2016.<sup>196</sup> SPC's judicial interpretations have been viewed as important normative documents in the legal and economic development in China;<sup>197</sup> therefore, the above mentioned *Interpretation* may substantially influence the judicial practice in patent litigation.

Article 24 of the *Interpretation* provides SPC's view on FRAND. Sections 1 and 3 of Article 24 stipulate the “negotiation before litigation principle” in FRAND disputes. According to Section 1, SPC does not support the defense raised by the alleged infringer that it does not need to obtain a license from the SEP holder to practice the subject SEP.<sup>198</sup> Section 3 stipulates that licensing terms should be negotiated by SEP holder and the alleged infringer, and parties may request the people's courts determine the licensing terms if no consensus can be reached from the negotiation.<sup>199</sup>

Section 2 of Article 24 provides a defense for standard implementers in patent litigation initiated by the SEP holder.

194. Provisions, art. 2.

195. NAT'L RESEARCH COUNCIL, PATENT CHALLENGES FOR STANDARD-SETTING, *supra* note 1, at 12.

196. Zuigao Renmin Fayuan Guanyu Shenli Qinfan Zhuanliquan Jiufen Anjian Yingyong Falv Ruogan Wenti De Jieshi II (最高人民法院关于审理侵犯专利权纠纷案件适用法律若干问题的解释(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], (issued by Sup. People's Ct., Mar. 31, 2016, effective April 1, 2016) (China), <http://www.court.gov.cn/fabu-xiangqing-18482.html> [<https://perma.cc/FSG9-CDKF>].

197. See, e.g., Eric C. Ip, *The Supreme People's Court and the Political Economy of Judicial Empowerment in Contemporary China*, 24 COLUM. J. ASIAN L. 367, 403 (2011).

198. Interpretation (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases, art. 24, § 1.

199. Interpretation (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases, art. 24, § 3.

According to Section 2, the SEP holder's request to prevent the implementer from practicing the subject SEP is not validated if (1) parties fail to reach a license agreement because the SEP holder violates its FRAND obligation during the preparation of the standard and its negotiation with the implementer, and (2) the implementer does not commit any obvious fault.<sup>200</sup> This Section provides standard implementers significant advantage over SEP holders' claims for infringement. The latter will not be able to use an injunction or litigation to force the former to accept licensing terms that are against the FRAND commitment during the negotiation.<sup>201</sup> However, Section 2 is not a direct legal basis for standard implementers to enforce SEP holders' FRAND obligations. It is, at most, a defense, rather than a legal right, that standard implementers can raise against SEP holders' injunction or infringement claims. Nonetheless, it is not yet clear if SPC aimed to define FRAND commitment as a "covenant not to sue" or an action with other legal effect in this *Interpretation*.<sup>202</sup> It is worthwhile to observe how Chinese courts implement Section 2 of Article 24 in the *Interpretation* in the future.

## V. JUDICIAL DETERMINATION OF THE FRAND RATE

In *Huawei*, IDC argued that the court should not intervene in the licensing negotiations between private parties.<sup>203</sup> However, Shenzhen Intermediate People's Court countered by pointing out that IDC had a double standard for judicial intervention: on the one hand, it resorted to court for injunctions in the United States and yet sought to prevent Huawei from seeking judicial remedy on the other.<sup>204</sup> Based on the decision of Shenzhen Intermediate People's Court, the Guangdong High Court further stated that although it was not a compulsory licensing (CL) case, IDC could not refuse to license to Huawei because of its FRAND commitment.<sup>205</sup> The court held that there were some similarities between CL and FRAND scenarios in terms of royalty rate

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200. Interpretation (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases, art. 24, § 2.

201. *Id.*

202. See, e.g., Kesan & Carol M. Hayes, *FRAND's Forever*, *supra* note 1, at 289 ("[W]hen a patent owner makes a FRAND commitment, we argue that this acts as a conditional covenant not to sue, whereby the patent owner promises to not sue standard implementers for infringement unless and until good faith attempts at negotiation fail.")

203. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

204. *Id.*

205. *Id.*

determination.<sup>206</sup> In both situations, the court would decide the royalty rate if the negotiation between a patentee and a potential licensee breaks down.<sup>207</sup> One can certainly understand that Chinese patent law presumes that the court is capable of determining the royalty rate from the CL provision in Chinese patent law, which stipulates that the court needs to decide the CL royalty for a patentee and a potential licensee.<sup>208</sup> Therefore, by referring to Articles 57 and 58 of the Chinese Patent Law,<sup>209</sup> the *Huawei* court ruled that parties can resort to the courts if no agreement has been reached on royalty.<sup>210</sup> From a comparative perspective, the law or judicial practices of some European civil law countries, such as Germany and the Netherlands, also link FRAND obligations with CL to a certain degree.<sup>211</sup> Although the US practice clearly distinguishes the treatment of FRAND obligations and CL,<sup>212</sup> a line of theories has argued that the content and procedural implementation of CL and FRAND are fairly similar.<sup>213</sup> Indeed, the existence of CL in patent law presumes the court's capability of determining the FRAND rate. Nonetheless, commentators have long suggested that courts are ill-suited to interpret the reasonable and market values of IP licenses.<sup>214</sup>

Whether the court should intervene in the FRAND determination after the failed negotiations and whether it is capable of computing an appropriate rate may be two different matters. The

206. *Id.*

207. *Id.*

208. Patent Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 27, 2008), art. 58, <http://www.wipo.int/edocs/lexdocs/laws/en/cn/cn028en.pdf> [<https://perma.cc/8YDX-KUHY>] (China).

209. According to Article 57 of the Chinese Patent Law, the patent administration department under the State Council can decide the compulsory licensing rate if two parties cannot reach an agreement. Patent Law of the People's Republic of China, art 57.

210. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

211. Sternberg, *supra* note 8, at 237; *see also* Nuno Pires de Carvalho, *Technical Standards, Intellectual Property, and Competition—A Holistic View*, 47 WASH. U. J.L. & POL'Y 61, 82 (2015) (documenting that in a number of jurisdictions, courts may apply compulsory licensing provisions to ensure interoperability when the implementer's technology is technically and economically significant).

212. *See, e.g.*, Contreras, *A Brief History of FRAND*, *supra* note 42, at 45; Sternberg, *supra* note 8, at 239.

213. *See, e.g.*, Contreras, *A Brief History of FRAND*, *supra* note 42, at 45.

214. *See, e.g.*, Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1308 (1996); *see also* Christoph Rademacher, *Injunctive Relief in Patent Cases in the US, Germany and Japan: Recent Development and Outlook*, in *INTELLECTUAL PROPERTY IN COMMON LAW AND CIVIL LAW* 325, 340 (Toshiko Takenaka ed., 2013) (noting that the German Federal Supreme Court ruled that courts do not have a position to evaluate a reasonable royalty rate). *But see* Christine Graham & Jeremy Morton, *Latest EU Developments in Standards, Patents, and FRAND Licensing*, 36 EURO. INTEL. PROP. REV. 700, 705 ("Undoubtedly, the courts are capable of assessing a FRAND rate.").



*Huawei* court opined that it should intervene because IDC had once resorted to the judicial system against Huawei as well.<sup>215</sup> The *Huawei* court ruled that it was competent to determine the FRAND rate based on an analogy with the CL provision in Patent Law.<sup>216</sup> Comparatively, some US courts also faced the question regarding their roles in FRAND determination. In *Apple*, Judge Crabbe decided not to determine a reasonable rate because “it would not be in the public interest for the court to spend such enormous resources to determine a FRAND rate that may ultimately lead to additional litigation.”<sup>217</sup> This decision concerned the limited judicial resources, rather than the court’s ability to determine the FRAND rate. By contrast, in *Microsoft v. Motorola*, the judge held that:

Having made the determination that Motorola must grant a [F]RAND license for its essential patents, the court is left with the inescapable conclusion that a forum must exist to resolve honest disputes . . . as to what in fact constitutes a [F]RAND license agreement. Here the courthouse may be the only such forum.<sup>218</sup>

The *Huawei* court’s approach to the judicial role in the determination of the FRAND rate is similar to that of *Microsoft*, which is that the court should undertake the complex task of determining the FRAND royalty rate. This Part will analyze how the *Huawei* court decided the FRAND rate from a critical perspective. This Part will also identify the flaws and inadequacies in *Huawei* from the perspective of an appropriate basis for royalty computation<sup>219</sup> and the timing of the hypothetical negotiation.<sup>220</sup>

### A. Reasonable and Non-Discriminatory

The *Huawei* court made it clear that the goal of FRAND is to assure that patentees can obtain sufficient compensation for their technological innovation, while ensuring that they cannot exploit the favorable position given them by the standard by charging an overly high royalty rate or imposing unreasonable conditions.<sup>221</sup> In other words, from a policy perspective, FRAND aims to look after the incentive provided by the patent system and, in the meantime, avoid

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215. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

216. *Id.*

217. *Apple, Inc. v. Motorola Mobility, Inc.*, No. 11-CV-178-BBC, 2012 WL 5416931, at \*3 (W.D. Wis. Nov. 2, 2012).

218. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2012 WL 4827743, at \*6 (W.D. Wash. Oct. 10, 2012).

219. *See infra* parts IV.A and IV.B.

220. *See infra* part IV.C.

221. *Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司)* [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People’s Ct. 2013) (China).

the hold-up problem. Both first- and second-instance courts in the *Huawei* case ruled that IDC violated its FRAND obligation.<sup>222</sup> A lengthy part of both decisions analyzed whether IDC's royalty offers to Huawei were reasonable and non-discriminatory. Such analysis is closely related to the determination of the FRAND rate.

*Huawei* also illustrates that once the court points out the SEP holder's violation of the FRAND obligation, it may use the same criteria to calculate the FRAND rate. To put it differently, the court may determine the FRAND rate based on the factors that it used to find the unfairness, unreasonableness, and discrimination from the SEP holder's previous royalty offers.

### 1. Reasonable Rate

#### *a. Factors to Be Considered for Determining a Reasonable Rate*

A "reasonable royalty" is at the heart of FRAND commitment.<sup>223</sup> However, the term "fair and reasonable" is too ambiguous to be constrained by only one interpretation.<sup>224</sup> Scholars have pointed out that the reasonable royalty of FRAND-encumbered patents can be obtained from a hypothetical voluntary transaction or negotiation.<sup>225</sup> The Guangdong High Court affirmed the Shenzhen Intermediate People's Court's ruling that the FRAND rate, in this case, should not exceed 0.019 percent of the actual sales prices of Huawei's wireless devices.<sup>226</sup> In determining this "reasonable" rate and evaluating IDC's previous offers to Huawei, the court took into consideration the factors below:<sup>227</sup>

- (1) The profits generated by employing the subject SEPs or similar patents, and the proportion of such profits in the licensee's overall profits and revenue<sup>228</sup>;

222. *Id.*

223. *See, e.g.*, Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1146; *see also* Tsai & Wright, *supra* note 48, at 161 (noting that the deficiencies of SSOs' IPR policies include "contractual ambiguity, such as the adoption of terms subject to ex post interpretation").

224. *See, e.g.*, Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 939–40; *see also* Keele, *supra* note 35, at 191 ("[T]he [F]RAND commitments . . . have remained intentionally vague . . .").

225. *See, e.g.*, Allensworth, *supra* note 42, at 245; Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 939; Keele, *supra* note 35, at 223; Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1147; Ragavan et al., *supra* note 26, at 91.

226. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

227. *Id.*

228. *Id.*

- (2) Whether the patentee can profit only from its patent, not the standard<sup>229</sup>;
- (3) The number of valid patents in the standard held by the patentee<sup>230</sup>; and
- (4) Whether the royalty should account for part of, not all, the licensee's profits from the product because SEPs contribute only part of the product's value.<sup>231</sup>

The first factor looks into the profits of the implementer and the proportion of profits contributed by SEPs. Likewise, in *Microsoft v. Motorola*,<sup>232</sup> Judge Robart pointed out that the FRAND rate should be set by “looking at the importance of . . . the SEPs to the products at issue.”<sup>233</sup> Such analysis is also similar to Judge Holderman’s approach, suggested by Dr. Gregory Leonard, in *In re Innovatio IP Ventures, LLC Patent Litigation*,<sup>234</sup> where no previous benchmark license was available.<sup>235</sup> By proposing the “top down” methodology,<sup>236</sup> Dr. Leonard intended to ensure that “the total royalty stack will not exceed an amount that would force [implementers] out of business.”<sup>237</sup> Nevertheless, the main difference between *Huawei* and *Innovatio* is that the *Innovatio* court used the real numbers of SEPs, profits, and average sale prices to calculate the FRAND rate.<sup>238</sup> By contrast, the *Huawei* court stated that it took into consideration Huawei’s profits and the proportion contributed by IDC’s SEPs, but the court did not conduct any calculation with numbers associated with Huawei’s profits and sales price.<sup>239</sup> It is, therefore, quite difficult to understand how the first factor influenced the court’s determination of the FRAND rate.

229. *Id.*

230. The court explained further that it is, therefore, unreasonable for the SEPs holder to charge the implementer a royalty for non-SEPs. See 2013 Yue Gao Fa Min San Zhong Zi No. 305.

231. *Id.*

232. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013).

233. *Id.* at \*3.

234. *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at \*38 (N.D. Ill. Oct. 3, 2013).

235. *Id.* at \*31, \*38.

236. See, e.g., Maldonado, *supra* note 3, at 454.

237. *In re Innovatio*, 2013 WL 5593609, at \*38.

238. Guangliang Zhang & Gary Zhang, *A Review of Huawei v IDC, MANAGING INTELL. PROP.* (Mar. 27, 2015), <http://www.managingip.com/Article/3440420/A-review-of-Huawei-v-IDC.html> [https://perma.cc/9CK6-FP4Q].

239. *Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi* (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People’s Ct. 2013) (China).

*Huawei's* insufficient elucidation may demonstrate the degree of sophistication required to apportion the value of specific SEPs from the whole product involving numerous technologies. This sophisticated calculation may fall beyond the *Huawei* court's ability.

The *Huawei* court made it clear that SEP holders can only collect royalties associated with the technological contribution, rather than the fact that such patents are SEPs.<sup>240</sup> It is noteworthy that the second factor—"patentee can only profit from its patent, not the standard"—is consistent with some economists' suggestion that "[r]easonable should mean the royalties that the patent holder could obtain in open, up-front competition with other technologies, not the royalties that the patent holder can extract once other participants are effectively locked in to use technology covered by the patent."<sup>241</sup> Judge Robart in *Microsoft* likewise noted that "[f]rom an economic perspective, a [F]RAND commitment should be interpreted to limit a patent holder to a reasonable royalty on the economic value of its patented technology itself, apart from the value associated with incorporation of the patented technology into the standard."<sup>242</sup> In other words, SEP holders should not exploit the subject standard and the accompanying lock-in effect to charge a higher royalty rate; otherwise, the hold-up problem will come into existence in the standard implementation process.<sup>243</sup>

The third factor—"the number of valid patents in the standard held by the patentee"—emphasizes the role of SEPs in the overall standard.<sup>244</sup> This consideration can also be found in some academic discussions.<sup>245</sup> By the same token, in the *Microsoft* case, the district court looked into "the objective value each [SEP] contributed to each standard."<sup>246</sup> In determining such "objective value," the *Microsoft* court considered "the quality of the technology and the alternatives as well as the importance of those technologies to Microsoft's business."<sup>247</sup> The idea of "the importance of those technologies to Microsoft business"<sup>248</sup> is close to the first and the fourth factors listed by the *Huawei* court, which

240. *Id.*

241. CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 241 (1999).

242. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at \*12 (W.D. Wash. Apr. 25, 2013)

243. *Id.* at \*12, \*19; see *supra* note 47 and accompanying text.

244. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

245. See, e.g., Anne Layne-Farrar et al., *supra* note 44, at 675–79 (2007); Sternberg, *supra* note 8, at 245.

246. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1040 (9th Cir. 2015).

247. *Id.*

248. *Id.*

underline SEPs' contributions to the standard implementer's business or products.

The fourth factor puts a limit on the royalty rate based on the profits that an implementer can reasonably extract from the product and the contribution of the subject SEPs. Economists have similarly suggested that the incremental value in hypothetical negotiations should "be less than the full profits of the licensee."<sup>249</sup> This factor echoes the idea of "incremental value," which refers to the value contributed by the SEP in a product.<sup>250</sup> In *Microsoft*,<sup>251</sup> Judge Robart also carefully considered the implementer's ability to pay the royalty fee from selling the product.<sup>252</sup> Such considerations recall the royalty stacking theory, contending that, in order to avoid royalty stacking, SEPs should not be awarded more than a certain percentage of the price of implementers' products; otherwise, the price would be unreasonable.<sup>253</sup> In other words, when multiple SEP holders claim for royalties against the same implementer, the total of the royalties should not exceed the profits earned by the implementer from the subject product.<sup>254</sup> However, in order to prevent royalty stacking, Judge Robart established the upper bound of the FRAND rate by calculating a pro rata share of Motorola's SEP portfolio.<sup>255</sup> By contrast, the *Huawei* court did not conduct any similar detailed calculations.<sup>256</sup> Without such a calculation, the FRAND rate that *Huawei* reached may be criticized as a speculation.

Most of the factors listed by the *Huawei* court are general and not explained in detail. This may result from the difficulty in measuring the value of SEPs,<sup>257</sup> a difficulty that *Huawei* did not mention at all.<sup>258</sup> Beyond these factors, the court ruled that IDC's offer to tie its SEP with non-SEP patents was neither fair nor reasonable.<sup>259</sup>

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249. Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 536.

250. Contreras & Gilbert, *A Unified Framework for FRAND*, *supra* note 3, at 1467–68.

251. *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013).

252. *Id.* at \*260–61.

253. See, e.g., Damien Geradin & Miguel Rato, *FRAND Commitments and EC Competition Law: A Reply to Philippe Chappatte*, 6 EUR. COMPETITION J. 129, 138 (2010); Lemley & Shapiro, *supra* note 42, at 2011. But see Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 943–44 (criticizing the assumptions and applications of the royalty stacking theory).

254. See, e.g., Contreras & Gilbert, *A Unified Framework for FRAND*, *supra* note 3, at 1483.

255. *Microsoft*, 2013 WL 2111217, at \*87.

256. *Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司)* [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

257. *Microsoft*, 2013 WL 2111217, at \*13 (indicating the difficulty of deciding the incremental value of patents).

258. *Id.*

259. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

In exchange for the license of its SEP, IDC asked Huawei and its affiliated companies to grant a global royalty-free cross-license of all its patents.<sup>260</sup> The court looked into factors such as the number of R&D employees and patents both companies have, and concluded that Huawei's patent portfolio is more valuable regarding quantity and quality, and the global royalty-free cross-license requested by IDC was, thus, obviously unfair and unreasonable.<sup>261</sup>

*b. Cross Licensing and NPEs*

Nevertheless, cross licensing is a common practice in the context of SEPs and the high technology industry generally.<sup>262</sup> Whether a cross license is fair and reasonable cannot be determined purely by the comparison of R&D employees and patent portfolios. Cross-licensing may sometimes help reduce the royalty rate of SEPs. Therefore, the practice of cross licensing can, to some extent, prevent royalty stacking and the accompanying costs borne by implementers.<sup>263</sup> However, without conscientious evaluation of both parties' patent portfolios, the *Huawei* court reached the conclusion that IDC's cross-licensing and royalty proposal was neither fair nor reasonable.<sup>264</sup> This insufficient analysis is probably because the court was of the opinion that the royalty rate requested by IDC was already excessively high, irrespective of a cross license. Therefore, it was obvious that a global royalty-free cross license from Huawei could not help mitigate the royalty stacking problem at all.

*Huawei* also provides an interesting lens to understand the role of NPEs—entities that make profit from asserting patents without making and selling products<sup>265</sup>—in SEP disputes. Conventional wisdom suggests that NPEs would not seek cross licensing in infringement disputes as they do not produce products and, thus, do not need cross licenses from their adversaries.<sup>266</sup> This line of argument

260. *Id.*

261. *Id.*

262. *See, e.g., Geradin, The Meaning of "Fair and Reasonable", supra note 6, at 943; Maldonado, supra note 3, at 428.*

263. *See, e.g., Geradin, The Meaning of "Fair and Reasonable", supra note 6, at 943–44. But see Maldonado, supra note 3, at 420 ("[C]ross-licensing has done little to stem the tide of litigation.")*

264. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

265. *See supra* note 70 and accompanying text.

266. *See, e.g., Allison et al., supra note 70, at 1129–30; Tracie L. Bryant, Note, The America Invents Act: Slaying Trolls, Limiting Joinder, 25 HARV. J.L. & TECH. 673, 691 (2012); Colleen V. Chien, Holding Up and Holding Out, 21 MICH. TELECOMM. & TECH. L. REV. 1, 31 (2014); Cotropia et al., supra note 70, at 650; James Farrand et al., "Reform" Arrives in Patent Enforcement: The Big Picture, 51 IDEA 357, 441 (2011); Lim, Standard Essential Patent, at 19; Ian Polonsky, You Can't Go Home Again: The Righthaven Cases and Copyright Trolling on the Internet, 36 COLUM.*

suggests that NPEs are interested only in monetary payment.<sup>267</sup> However, as an NPE, IDC did seek a free global cross license from Huawei.<sup>268</sup> In the court proceedings, IDC argued that a cross license would not create any value for the company because it did not produce or sell any product.<sup>269</sup> Thus, its pursuit of a cross license from Huawei would not violate the FRAND commitment.<sup>270</sup> It was not clear why IDC was interested in obtaining cross-licensing from Huawei. The court ruled that a free license from Huawei would significantly increase IDC's market value, and it was possible that IDC would exploit the cross-licensed patents to produce products in the future.<sup>271</sup> However, the court neither explained how and to what extent a free cross license would significantly increase an NPE's market value, nor provided any evidence supporting such an opinion.

## 2. Non-Discriminatory Rate

In the context of standard-setting, "non-discriminatory" means that all similarly situated implementers should pay the same royalty rate for SEP-encumbered patents.<sup>272</sup> As royalties constitute an essential part of product costs,<sup>273</sup> standard implementers are naturally not willing to pay a higher rate than their competitors do; otherwise, they will have insurmountable difficulties competing with other players on price. In this sense, a non-discriminatory rate ensures standard implementers, especially newcomers, a level playing field in the industry.<sup>274</sup> The SEP royalty's nature as costs for implementers' market entry explains why standard implementers typically show great concern about the non-discriminatory rate. With the non-discriminatory requirement, newcomers are able to benefit from a

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J.L. & ARTS 71, 73 n.13 (2012); Soroudi, *supra* note 70, at 323–24; Sinan Utku, *The Near Certainty of Patent Assertion Entity Victory in Portfolio Patent Litigation*, 19 J. TECH. L. & POL'Y 1, 18 (2004); Allen W. Wang, Note, *Rise of the Patent Intermediaries*, 25 BERKELEY TECH. L.J. 159, 172 (2010).

267. See, e.g., Allison et al., *supra* note 70, at 1129–30; David L. Schwartz, *On Mass Patent Aggregators*, 114 COLUM. L. REV. SIDEBAR 51, 53 (2014).

268. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

269. *Id.*

270. *Id.*

271. *Id.*

272. See, e.g., Allensworth, *supra* note 42, at 243; Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 546; Joseph Scott Miller, *Standard Setting, Patents, and Access-in: RAND Licensing and the Theory of the Firm*, 40 IND. L. REV. 351, 355 (2007); Sternberg, *supra* note 8, at 233.

273. See, e.g., David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913, 1956 n.149 (2003).

274. See, e.g., John Temple Lang, *Eight Important Questions on Standards Under European Competition Law*, 7(1) COMPETITION L. INT'L 32, 32 (2011); Ragavan et al., *supra* note 26, at 92.

license *ex ante* negotiated by their competitors and SEP holders. Consequently, newcomers or other standard implementers do not need to worry that SEP holders will charge them a higher rate than their competitors. As economists suggest, the non-discriminatory requirement can avoid SEP holders' strategic behavior and mitigate corresponding inefficiencies.<sup>275</sup>

Scholars have been debating whether there is a mathematical formula to calculate the FRAND rate.<sup>276</sup> In determining a non-discriminatory rate, the *Huawei* court held that the SEP holders should charge the standard implementers the same royalty rate in other transactions with the same fundamental conditions.<sup>277</sup> The US court in *Apple* held a similar opinion that "only . . . licenses should be considered when comparable."<sup>278</sup> The royalty rate under other licenses for the same patent is occasionally an important factor to determine the "reasonableness," as well.<sup>279</sup> Nonetheless, as there is always a wide range of factors in different licensing transactions,<sup>280</sup> it is obviously not easy to define what is a transaction "with the same fundamental conditions," or a "comparable" license. Furthermore, licensing arrangements are occasionally relationship specific.<sup>281</sup> Company X's licensing agreement with Company Y is not necessarily the same as its transaction with Company Z over the same patents.

The *Huawei* courts opined that IDC had violated the FRAND obligation because it charged Huawei unreasonably high licensing rates, which were excessively higher than those paid by Apple and Samsung.<sup>282</sup> Such an approach seems plausible as SEP holders' deals with other implementers sometimes become evidence of a reasonable price and because SEP holders should not discriminate against different implementers.<sup>283</sup> In the United States, patentees' previous agreements with other parties have been used to determine damages

275. See, e.g., Carlton & Shampine, *supra* note 3, at 546–47; Richard J. Gilbert, *Deal or No Deal? Licensing Negotiations in Standard-Setting Organizations*, 77 ANTITRUST L.J. 855, 868–70 (2011).

276. See, e.g., Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 938, 949.

277. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

278. *Apple, Inc. v. Motorola, Inc.* 757 F.3d 1286, 1323 (Fed. Cir. 2014).

279. See, e.g., Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 949–50.

280. See, e.g., Contreras, *A Brief History of FRAND*, *supra* note 42, at 78; Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 928.

281. Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 951–52; see also Contreras, *Fixing FRAND*, *supra* note 2, at 70 ("[T]he determination of 'reasonable' rates can be highly context-specific, as well as party-specific and patent-specific.")

282. 2013 Yue Gao Fa Min San Zhong Zi No. 305.

283. Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1149.



for patent infringement in hypothetical royalty agreements.<sup>284</sup> In *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, the Southern District of New York set out fifteen factors to consider in deciding a reasonable royalty rate the parties might have agreed upon in a hypothetical negotiation.<sup>285</sup> Such a framework has been widely adopted by district and Federal Circuit courts in the United States to calculate patent damages.<sup>286</sup> In recent years, some US courts have adopted a number of

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284. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

285. *Id.* These fifteen factors are:

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or conveyed sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the product made under the patent; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.
11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.
14. The opinion testimony of qualified experts.
15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee— who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention— would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

286. *See, e.g.*, *LaserDynamics, Inc. v. QuantaComputer, Inc.*, 694 F.3d 51, 60 n.2 (Fed. Cir. 2012); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324–25 (Fed. Cir. 2009); *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157–58 (6th Cir. 1978); *Contreras & Gilbert, A Unified Framework for RAND*, *supra* note 3, at 1481.

*Georgia-Pacific* factors to determine the FRAND royalty rate,<sup>287</sup> including the royalties a patent holder received in other licensing agreements.<sup>288</sup> The primary advantage of the *Georgia-Pacific* framework is that it takes multiple factors into consideration in a flexible way, which appropriately fits FRAND's goal of balancing the interests of SEP holders and standard implementers.<sup>289</sup> Therefore, it is not surprising that the internal discussion of ETSI also recognized that the *Georgia-Pacific* test "closely parallels the concept of [FRAND] license obligations."<sup>290</sup>

The *Huawei* court likewise used the royalties that IDC received from its transactions with Apple and Samsung to determine the FRAND rate.<sup>291</sup> IDC offered Apple a seven-year (from 2007 to 2014), non-exclusive, and non-transferrable global license for \$56 million.<sup>292</sup> Based on the public information disclosed by Apple and from other sources, the revenue associated with iPhone in the same period was at least \$300 billion.<sup>293</sup> Therefore, the court estimated that Apple's royalty to IDC was about 0.0187 percent of Apple's iPhone sales revenue.<sup>294</sup> On the other hand, IDC had a three-year (from 2009 to 2012) non-exclusive, non-transferrable global license agreement with Samsung for \$400 million.<sup>295</sup> Based on the public information disclosed by Samsung and from other sources, the court estimated that Samsung's revenue associated with smartphone sales from 2007 to 2012 was \$210 billion. Therefore, the court further calculated that Samsung's royalty rate paid to IDC was about 0.19 percent of Samsung's smartphone sales revenue.<sup>296</sup>

The rates estimated by the court regarding IDC's transactions with Apple and Samsung are quite different (0.0187% as opposed to

287. See, e.g., *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1041 (9th Cir. 2015); *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1230 (Fed. Cir. 2014); *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at \*6 (N.D. Ill. Oct. 3, 2013); Contreras, *Fixing FRAND*, *supra* note 2, at 71; see also Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1459 ("[R]ecent federal court opinions have modified the *Georgia-Pacific* factors to accommodate perceived unique characteristics of [F]RAND commitments."); Anne Layne-Farrar et al., *supra* note 44, at 673–81.

288. *Microsoft*, 795 F.3d at 1043.

289. Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 948–49.

290. See *id.*, at 948 n.120.

291. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

292. See *id.*

293. See *id.*

294. See *id.*

295. See *id.*

296. See *id.*

0.19%, respectively).<sup>297</sup> The court contended that Apple's rate should be closer to a FRAND rate as IDC licensed those SEPs to Apple in 2007, and the court believed that the deal was made on a fair, equal, and voluntary basis.<sup>298</sup> By contrast, Samsung and IDC entered into the license agreement against the backdrop of litigation between both parties.<sup>299</sup> The court, therefore, implied that the IDC/Samsung transaction was not an ideal reference for determining the FRAND rate.<sup>300</sup>

The *Huawei* court is not the only one that considered litigation as an important factor to determine FRAND rates. From a comparative perspective, the US courts in *Microsoft* had similar considerations in determining the FRAND rate at issue there.<sup>301</sup> Both the Ninth Circuit and the district court found that Motorola's licenses with VTech Communications, RIM, and Symbol were not trustworthy indicators for the FRAND rate because the deals were all entered into to resolve ongoing infringement disputes or litigation.<sup>302</sup> Likewise, in *In re Innovatio IP Ventures, LLC Patent Litigation*,<sup>303</sup> Judge Holderman held that if a license was part of a settlement made under the duress of litigation, such a license was not a comparable license to determine the FRAND rate.<sup>304</sup> Therefore, whether a previous license was made as a result of infringement litigation or settlement is an important factor to choose a comparable benchmark for FRAND determination.

The main criticism of the *Huawei* decisions is that the courts did not develop detailed reasoning for the estimated FRAND rate of 0.019 percent of the actual sales prices of Huawei's wireless devices, especially compared to similar cases decided by the US courts.<sup>305</sup> Some commentators believe that the FRAND rate of 0.019 percent is actually

297. *See id.*

298. *See id.*

299. *See id.*

300. *See id.*

301. *See id.*

302. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1043–44 (9th Cir. 2015).

303. *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at \*38 (N.D. Ill. Oct. 3, 2013).

304. *Id.* Some patent law scholars hold a similar view, as well. *See, e.g.,* Lim, *Standard Essential Patent*, *supra* note 1, at 39–40 (“Licenses resulting from settlement agreements should be disregarded because their reliability is compromised by the fact that royalty figure might be higher than if it were determined by the court.”); *see also* John M. Goden, *Principles for Patent Remedies*, 88 TEX. L. REV. 505, 508 (2010) (finding that, historically, a patent holder might leverage to obtain a settlement for a higher royalty).

305. Zhou Zhaofeng, *Huawei Uses AML to Fight Back*, CHINA L. & PRAC. (Jan. 16, 2014), <http://www.chinalawandpractice.com/sites/clp/2014/01/16/huawei-uses-aml-to-fight-back/> [<https://perma.cc/V4NQ-GUXF>].

much lower than the comparable royalty rate in the global market.<sup>306</sup> Some even suspect that this rate was set low enough to meet the industrial policy that aimed to promote Huawei's competitiveness in the global telecommunications industry.<sup>307</sup>

Although we have no evidence regarding such industrial concerns in the court decision, it is fair to say that the *Huawei* courts have attempted to meet the international standards to a certain degree. The reasoning in *Huawei* is far from sufficient and satisfactory. Nonetheless, it did identify some of the crucial issues underlying FRAND and SEPs. As Judge Holderman carefully observed in *Innovatio*, "no approach for calculating a [F]RAND rate is [perfect] in light of the inherent uncertainty in calculating a reasonable royalty" because "the court must reconstruct a hypothetical negotiation under a variety of assumptions and inferences about the influence of the [F]RAND obligation on hypothetical parties negotiating at a hypothetical time under hypothetical circumstances."<sup>308</sup> In the next two sections, this Article will analyze *Huawei's* approach in rate calculation base and the timing of the hypothetical negotiation.

### B. Methods of Royalties Calculation

The *Huawei* court rightfully pointed out that SEP holders have different options for calculating the royalty rate.<sup>309</sup> However, it did not explain in detail the differences between the royalty calculation approaches of the IDC/Apple transaction and the hypothetical negotiation in this case, nor how the differences matter for the determination of a FRAND rate. One of the important references for the Shenzhen Intermediate People's Court and the Guangdong High Court to decide 0.019 percent as the FRAND rate was the royalty that IDC charged Apple in a seven-year non-exclusive license agreement.<sup>310</sup> According to the courts' calculations, IDC charged Apple 0.018 percent of its revenue as a licensing fee, which, compared to Samsung's rate of 0.19 percent of revenue, is fairer and based on voluntary negotiation.<sup>311</sup> By contrast, the IDC/Samsung license was made against the backdrop

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306. *An Unexpected Turn for IPRs in China*, ECONOMIST (Nov. 26, 2014), <http://www.eiu.com/industry/article/1992525183/an-unexpected-turn-for-iprs-in-china/2014-11-27> [<https://perma.cc/Q5WQ-DCSW>].

307. Sokol & Zheng, *FRAND in China*, *supra* note 12, at 91.

308. *In re Innovatio*, 2013 WL 5593609, at 37.

309. Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

310. *See id.*

311. *See id.*

of infringement litigation.<sup>312</sup> Therefore, the FRAND rate, in this case, should be close to Apple's rate of 0.0187 percent.<sup>313</sup>

Nonetheless, the *Huawei* courts failed to capture other facts and background of the transaction between Apple and IDC. When IDC and Apple signed the license agreement in 2007, Apple had not yet released the first generation iPhone, not to mention that most people did not expect that Apple would become the toughest player in the smartphone market.<sup>314</sup> Therefore, IDC, like most other players in the market, could hardly imagine that Apple's iPhone would become a huge business success that brought in about \$300 billion in sales revenue in seven years. There are a variety of ways to determine a royalty structure in a patent licensing transaction. It can be a fixed fee; a certain percentage of the licensee's revenue, sales, net profits, or gross profits from products reading on the subject patent; or a royalty on the number of products produced by the licensee.<sup>315</sup> Different industries may have different practices and formats for royalty payment, which are all pricing decisions made by the parties.<sup>316</sup> Sometimes the parties may use a mixed approach to calculating the license fee. For example, in order to obtain a license to Motorola's SEPs for mobile devices, RIM "provided Motorola a license to its own SEPs, paid Motorola a large lump sum, and agreed to pay as a royalty rate a percentage of the net sales price of any mobile device it sold, subject to an annual royalty cap."<sup>317</sup>

According to the agreement between IDC and Apple, the royalty was a fixed amount of \$56 million set beforehand, rather than 0.0187 percent of Apple's iPhone revenue.<sup>318</sup> The number 0.0187 percent was

312. *See id.*

313. *See id.*

314. Apple iPhone was indeed unblessed in the market back to 2007. *See, e.g.*, John Dvorak, *Apple Should Pull the Plug on the iPhone*, MARKETWATCH (Mar. 28, 2007), <http://www.marketwatch.com/story/apple-should-pull-the-plug-on-the-iphone> [<https://perma.cc/9A4P-K859>]; Tammy Parker, *Apple's iPhone: Were Predictions of Failure Wrong or Just Premature?*, FIERCEWIRELESSWORK (June 28, 2012), <http://www.fiercewireless.com/tech/story/apples-iphone-were-predictions-failure-wrong-or-just-premature/2012-06-28> [<https://perma.cc/LV2L-U4ZU>]; Martin J. Wagner, *The Unexpected Success of the 2007 Apple iPhone*, ALLEGIENT (Feb. 20, 2015), <http://blog.allegient.com/the-unexpected-success-of-the-2007-apple-iphone> [<https://perma.cc/UL45-NDDF>].

315. *See, e.g.*, Encino Bus. Mgmt., Inc. v. Prize Frize, Inc. (*In re Prize Frize, Inc.*), 32 F.3d 426, 427–29 (9th Cir. 1994); ROBERT W. GOMULKIEWICZ ET AL., LICENSING INTELLECTUAL PROPERTY: LAW AND APPLICATION 68 (2008); RAYMOND T. NIMMER, LICENSING OF INTELLECTUAL PROPERTY AND OTHER INFORMATION ASSETS 523–25 (2004); KENNETH L. PORT ET AL., LICENSING INTELLECTUAL PROPERTY IN THE INFORMATION AGE 294–96 (2nd ed. 2005).

316. *See, e.g.*, NIMMER, *supra* note 315, at 523–24.

317. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1043–44 (9th Cir. 2015).

318. *Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi* (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc.* (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

the court's hindsight, not the exact term written in the agreement.<sup>319</sup> IDC therefore argued in this case that the success of Apple iPhone is a commercial exception,<sup>320</sup> implying that the company should have charged Apple a much higher licensing fee or adopted a different royalty structure if it could have predicted iPhone's exceptional attainment. In this sense, the royalty set in the IDC/Apple licensing agreement may not be completely reasonable in hindsight.

**Table 2: IDC's Licenses with Apple and Samsung**

	Apple	Samsung
Time	2007~2014	2007~2012 <sup>321</sup>
Term	Non-exclusive, non-transferrable, global license	
Royalty Amount	USD \$56 Million	USD \$400 Million
Licensee's Revenue from Mobile Products	USD \$300 Billion	USD \$209.751 Billion <sup>322</sup>
Royalty Rate	0.0187%	0.19%

A fixed amount and a certain percentage of a licensee's revenue are different bases of royalty calculation, and they may be adopted for different concerns in licensing transactions.<sup>323</sup> Theoretically, if the licensor seeks more predictability and certainty, it will usually choose a fixed sum royalty.<sup>324</sup> By contrast, if the licensor expects exceptional success in the licensee's products, it is more likely to adopt a royalty structure based on a percentage of sales rather than an up-front flat sum.

The royalty structure in the 2007 IDC/Apple license does suggest that IDC was not expecting iPhone to become one of the top two players

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319. *Id.*

320. *Id.*

321. The license agreement was part of the settlement of patent infringement dispute between IDC and Samsung. Therefore, although it was signed in 2009, the licensing period started retroactively from 2007. *See id.*

322. The *Huawei* court obtained this number from reports produced by Strategy Analytics. According to Strategy Analytics, Samsung's revenue from its mobile products were USD\$24.213 billion in 2007, USD\$26.222 billion in 2008, USD\$27.478 billion in 2009, USD\$33.034 billion in 2010, and USD\$45.194 billion in 2011. Strategy Analytics estimated that Samsung's revenue from mobile products in 2012 would be USD\$53.61 billion. *See id.*

323. *See, e.g., GOMULKIEWICZ ET AL., supra note 315, at 68.*

324. *Id.*

in the global market.<sup>325</sup> As a fixed sum and a percent of sales are two different royalty schemes based on different concerns, it is not appropriate for the courts to decide the FRAND rate between Huawei and IDC directly based on the above-mentioned rate of 0.0187 percent. Given the significant difference between the times of the transactions, the expected profits of the standard implementers, and the base of royalty rates, the fixed amount set in the 2007 IDC/Apple agreement is not interchangeable with a certain percentage of Apple's iPhone revenue calculated by the court.

This is not to say that the *Huawei* courts should not consider the royalty that Apple paid to IDC for the determination of the FRAND rate. Apple/IDC is definitely an important reference in this case. However, instead of calculating the ratio of SEP royalty and Apple's revenue from iPhone, the courts should investigate the factors that influenced the determination of the \$56 million royalty, and how these factors can be applied in the Huawei/IDC negotiation.

### C. Timing of the Hypothetical Negotiations

The timing for the hypothetical negotiation between the SEP holder and the standard implementer is occasionally quite important for the determination of a FRAND rate. Nonetheless, this issue was not recognized in *Huawei*.<sup>326</sup> Although FRAND enforcement has different roots in US law and Chinese law,<sup>327</sup> the timing for the hypothetical negotiation is a common issue shared by both jurisdictions in the determination of a FRAND rate. Therefore, relevant discussions in the US cases may benefit Chinese courts in framing this issue in the future. In *Microsoft v. Motorola*, the Ninth Circuit did not take into consideration the timing of hypothetical negotiations between the two parties because "the alleged breach of contract was not tied to any specific date," and such breach may be found "based on Motorola's offer letters, its seeking a number of injunctions, or its overall course of conduct."<sup>328</sup> However, scholars have various opinions regarding the timing of the hypothetical negotiation. Some believe that it should be

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325. See, e.g., Arjun Kharpal, *iPhone 6 Pushes Apple to Top Spot, Tied with Samsung*, CNBC NEWS (Jan. 29, 2015), <http://www.cnbc.com/2015/01/29/iphone-6-pushes-apple-to-number-1-smartphone-maker-tied-with-samsung.html> [https://perma.cc/35LG-92LD]; Joe Rossignol, *iPhone Continues to Increase in U.S. Smartphone Market Share Ahead of "iPhone 6s" Debut*, MACRUMORS (Sept. 3, 2015, 10:48 AM), <http://www.macrumors.com/2015/09/03/iphone-us-market-share-comscore-2015/> [https://perma.cc/6NHT-2LZ3].

326. Huawei Jishu Youxian Gongsu Su Jiaohu Shuzi Tongxin Youxian Gongsu (华为技术有限公司诉交互数字通信有限公司) [Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

327. See *supra* notes 67–91 and accompanying text.

328. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1042 (9th Cir. 2015).

the time when the subject technology is adopted as a standard,<sup>329</sup> others suggest a later time for the hypothetical negotiation, which is “a time when both SEP holders and standard implementers have made a sunk investment.”<sup>330</sup> The advantage of having a single point of time for the hypothetical negotiation is that it provides more certainty for the FRAND rate determination.<sup>331</sup>

As Judge Robart held in *Microsoft v. Motorola*, and as many others argued, a FRAND royalty should represent only the value of the patented invention, rather than the “hold-up” value that may result from a better deal after a standard has been chosen.<sup>332</sup> Some researchers suggested as well that to determine a FRAND rate, courts should replicate the bargain before a standard is adopted and calculate the *ex ante* value.<sup>333</sup> As patent holders cannot leverage the standard or need to compete with each other to be included in the standard, the royalty rate before or at the time of adoption should be closest to a FRAND one.<sup>334</sup> This approach was adopted by Judge Robart in *Microsoft*,<sup>335</sup> which held that FRAND rates would be based on the SSO’s evaluation of alternatives for the patented technology and the goal of promoting pervasive adoption.<sup>336</sup> Thus, he ruled that the time to

329. See, e.g., Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1491–93; Cotter, *supra* note 3, at 358.

330. See Geradin, *The Meaning of “Fair and Reasonable”*, *supra* note 6, at 949.

331. See, e.g., Lim, *Standard Essential Patent*, *supra* note 1, at 42.

332. See, e.g., *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at \*12, \*19 (E.D. Wash. Apr. 25, 2013); see also *Apple, Inc. v. Motorola, Inc.*, 869 F. Supp. 2d 901, 913 (N.D. Ill. 2012); Mark R. Patterson, *Inventions, Industry Standards, and Intellectual Property*, 17 *BERKELEY TECH. L.J.* 1043, 1048 (2002); *supra* note 42 and accompanying text.

333. See, e.g., Bonadio, *supra* note 8, at 35–36; Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 545; Contreras, *Fixing FRAND*, *supra* note 2, at 56; Cotter, *supra* note 3, at 358; Michael G. Cowie & Joseph P. Lavelle, *Patents Covering Industry Standards: The Risks to Enforceability Due to Conduct Before Standard-Setting Organizations*, 30 *AIPLA Q. J.* 95, 148 (2002); Joseph Farrell, John Hayes, Carl Shapiro & Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 *ANTITRUST L.J.* 603, 616 (2007); Gilbert, *supra* note 276, at 862; Sternberg, *supra* note 8, at 224–26; see also Contreras & Gilbert, *A Unified Framework for RAND*, *supra* note 3, at 1487–88 (contending that the hypothetical negotiation before the standard was adopted should be applied to both SEPs and non-SEPs); Geradin, *The Meaning of “Fair and Reasonable”*, *supra* note 6, at 939 (introducing and criticizing the *ex ante* incremental value method, which assumes that the hypothetical negotiation take place “immediately before the standard is adopted”); *id.* at 952 (“If the rate asked by the SEP holder *ex post* standard adoption is no higher than the rate he obtained *ex ante* standard adoption, the *ex post* rate must be FRAND.”).

334. See, e.g., Allensworth, *supra* note 42, at 248; Contreras, *Fixing FRAND*, *supra* note 2, at 56.

335. *Microsoft*, 2013 WL 2111217, at 19 (“[T]he parties to a hypothetical negotiation under a [F]RAND commitment would consider alternatives that could have been written into the standard instead of the patented technology. The focus is on the period before the standard was adopted and implemented (i.e., *ex ante*).”).

336. See *id.* at 20.



determine the value of SEPs was at the time of adoption, rather than the time of infringement.<sup>337</sup> On the other hand, those who argue that the timing should be set after the adoption of the standard aim to capture the full commercial value of the subject SEPs.<sup>338</sup> They contend that parties may lack full understanding of such value before the technology is adopted by the standard.<sup>339</sup>

This study supports the viewpoint that an ideal timing to determine the FRAND rate in the hypothetical negotiation should not be the time after the subject patented technology is adopted in the standard. Lock-in and hold-up problems, which give undue leverage to patent holders, are more likely to occur after relevant patents are adopted by the standard and become SEPs.<sup>340</sup> To put it differently, a hypothetical negotiation before the technology was adopted as part of the standard does not reflect the patent holder's ability to hold up licenses. Once a patent becomes a SEP, standard implementers have no choice but to employ this SEP, and competition from other competing technologies is removed right away from the market.<sup>341</sup>

When IDC licensed those SEPs to Apple in 2007, it had not joined ETSI, nor had it made the FRAND commitment.<sup>342</sup> IDC could not charge the "hold-up" value in the transaction. Such a fact may provide a positive signal for the courts to determine the FRAND rate based on the transaction between IDC and Apple. However, this does not necessarily mean that the IDC/Apple transaction is a perfect reference for a FRAND rate in terms of timing. The transaction taking place too long ago may fail to reflect the real value and complete commercial application of a technology.<sup>343</sup> Some scholars thus argue that a reasonable royalty is based on a hypothetical negotiation between the SEPs holder and the standard implementer when the SSO is setting the standard.<sup>344</sup> The royalty rate should not be different for implementers that adopt the standard at different times.<sup>345</sup> The timing of the SSO setting the standard is crucial for the determination of a FRAND rate because a reasonable royalty should "reflect what would

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337. See *id.* at 19.

338. Bonadio, *supra* note 8, at 36.

339. See *id.*

340. See, e.g., Tsai & Wright, *supra* note 48, at 162.

341. Carlton & Shampine, *Economic Interpretation of FRAND*, *supra* note 3, at 536–38.

342. IDC joined in the ETSI and committed to license its SEPs on FRAND terms in September 2009. See *Huawei Jishu Youxian Gongsi Su Jiaohu Shuzi Tongxin Youxian Gongsi* (华为技术有限公司诉交互数字通信有限公司) [*Huawei Tech. Co. v. InterDigital Communications, Inc. (Huawei v. IDC)*], 2013 Yue Gao Fa Min San Zhong Zi No. 305 (Guangdong High People's Ct. 2013) (China).

343. Geradin, *The Meaning of "Fair and Reasonable"*, *supra* note 6, at 952.

344. See, e.g., Lemley & Shapiro, *Setting Reasonable Royalties*, *supra* note 7, at 1147.

345. See *id.*

happen as a result of well-informed *ex ante* technology competition.”<sup>346</sup> Parties involved in the standard setting process are also informed of the royalty for the second-best alternative.<sup>347</sup> Based on such understanding, the IDC/Apple transaction may not be an ideal indication for the hypothetical negotiation because at that time neither party may be well informed about the technology competition and the true value of the patented technology. If such technology was undervalued at that time, the *Huawei* court might have underestimated the FRAND rate.

## VI. CONCLUSION

Like most difficult IP controversies, disputes surrounding SEPs and FRAND-encumbered patents concern the fundamental IP legal and policy issues regarding the balance between incentives and access. Given the complexities underlying the dynamics in standard setting and adoption, it is no wonder that FRAND has left a variety of disagreements between SEP holders and standard implementers. *Huawei* no doubt testifies to China’s active role in the global communications industry as well as the court’s growing ability to handle complex patent litigation. As the country has become the world factory for various ICT products, legal issues pertaining to FRAND-encumbered SEPs come into play in the new phase of China’s economic and technological development.

China has carved out its own enforcement mechanism for FRAND with strong civil law characteristics in *Huawei*. Good faith; rather than the contractual relationship, has become standard implementers’ legal basis to enforce FRAND commitments against SEP holders. Although *Huawei* identified most key factors to determine the FRAND rate, its approach to rate calculation is less developed compared to that of its counterparts in the United States. While it is unclear whether the Chinese courts are tasked to implement the government’s industrial policy, their decisions concerning transnational patent disputes are having increasingly important effects on the global high-tech industry.

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346. *Id.* at 1148.

347. *See id.*

