V. Competition Policy and IPRs: Well-Functioning Symbiosis – A Case Study

A. Brief Introduction to SEP and Related Issues

In our daily life we take it for granted that "telephones talk to each other, the Internet works, and hairdryers plug into electrical sockets because private groups have set 'interface' standards, allowing compatibility between products made by different manufacturers."[105] A standard can be defined as a set of technical specifications that seeks to provide a common design for a product or process.[106] Without standards, we would have to buy different telephones whenever we travel to a different country or even to different regions in the same country. Standards will ensure interoperability of products from different manufacturers that are fundamental for consumers to save costs. Standards also promote quality, utility, safety, and foster competition among different producers for the benefits of consumers.

To ensure compatibility of different manufacturers' products, industry groups negotiate and agree on technical standards. These are standard setting organisations (SSOs).[107] The chosen technology should be the most suitable for that specific sector and will be incorporated in the industry, be it mechanical, electrical, chemical or telecommunication-related sectors. Implementing a standard may require use of a patented technology. Wherever a standard requires use of patented technology, this patent is called standard essential patents (SEPs).[108] An SEP holder may take advantage of his unique position and try to gain more market shares by exploiting his

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105 Mark. A. Lemley, *Intellectual Property Rights & Standard-Setting Organizations*, 90 Cal, L. Rev. 1889, 1893 (2002).

106 H. Hovenkamp et al., *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*, Sect. 35.1 (Supp.2003-04).

107 Steven M. Amundson, *Recent Decisions Provide Some Clarity on How Courts and Government Agencies Will Likely Resolve Issues Involving Standard-Essential Patents,* Chicago-Kent Journal of Intellectual Property, Vol. 13 (2013).

108 *Apple, Inc. v. Motorola Mobility, Inc*. 886 F. Supp.2d 1061, 1067 (W.D. Wis. 2012).

SEP to exclude others. In addition, SEP holder may impose higher royalty fees on licensees. This exploitation is named as patent hold-up.[109]

In recent years, patent hold-up problems in telecommunication industry appeared to be rampant, whereby competition policy was supposed to provide countermeasures. However, the situation is more complex than one can imagine. Studies demonstrated that damages payable to implementers solving the patent hold-up problem can restore their stimulus to invest. But this in turn would reduce innovators' incentives to carry on R&D and thus discourage further innovation.[110] In addition, complicated technologies, multitude of patent protections and fragmented ownership of SEPs in this field exacerbate the complexity. Hence, how to balance and optimize the interests of both parties has become a real challenge for competition enforcers.

Like in other major jurisdictions in the world, Chinese competition authorities have similar concerns on patent hold-up problems. Since the enactment of the Chinese Anti-Monopoly Law (AML) in 2008, both administrative and judicial competition authorities have been involved in applying competition law to the abuse of standard essential patents.

Besides the *Huawei* case which will be discussed more in-depth below, it is worth mentioning another landmark decision issued by China's competition agency NDRC - the *Qualcomm* decision. As a reminder, this company was abusing its dominant market position and charging Chinese mobile device producers excessively high royalty prices upon licensing its SEPs. Other unfair conditions such as bundling of SEPs with non-SEPs, charging royalties for invalid patents, royalty free granting-back were also found after fifteen months of investigation into the company. NDRC fined *Qualcomm* USD 975 million, which is the highest amount ever imposed upon a single company by Chinese competition authorities. The major findings of Qualcomm's abusive conduct for licensing its SEPs is reflected in the latest guidelines for applying AML to IPRs, which was discussed in Part IV.

In a globalized economy anticompetitive conduct in China will not only impact Chinese consumers, but also consumers in other parts of the world.

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109 Joseph Farrell et al., *Standard Setting, Patents & Hold-up*, 74 Antitrust Law Journal 603, 603-04 (2007).

110 Bernhard Ganglmair, et al., *Patent Hold-up and Antitrust: How a Well-Intentioned Rule Could Retard Innovation*, The Journal of Industrial Economics, Vol LX, June (2012).

In the following, *Huawei v. InterDigital* - another landmark decision taken by the Chinese courts on the intersection between competition regime and IPR will be elaborated.

B. Judicial Decision on Huawei v. InterDigital

1. Case outline

InterDigital Technology Corporation, Inc. (IDC) is an American company headquartered in Delaware. *IDC* as a group designs and develops advanced technologies for wireless communications, and owned more than 19 500 patent and patent applications worldwide at the time of the lawsuit in December 2011. Numerous patents in its portfolio were SEPs. *IDC* had participated in the formulation of international wireless communication standards.

Huawei Technologies Co., Ltd. (Huawei), based in Shenzhen, China, is the largest manufacturer of telecommunication devices in the world. Its products are exported to more than 170 countries and regions.[111] *Huawei* serves almost all of the world's largest telecom operators, and among others Huawei implements SEPs for wireless technologies from *IDC*.

Both companies are members of the European Telecommunications Standardisation Institute (ETSI). According to Art. 6.1 of ETSI Intellectual Property Rights Policy[112], once patents are declared standard essential patents, it is mandatory for members to grant irrevocable licenses on fair, reasonable, and non-discrimination (FRAND) conditions.

On December 5, 2011, *Huawei* filed two lawsuits against *IDC* at Shenzhen Intermediate People's Court (Shenzhen Court). In the first complaint (case 857)[113] *Huawei* asked for a judicial ruling on the level of royalties for certain patents to be paid by *Huawei* to *IDC*. In the second complaint (case 858)[114] Huawei alleged that *IDC* had abused its dominant market position pursuant to Art. 17 of the AML, and *IDC* failed to negotiate on

111 See Annual Report of Huawei, 2016, available at http://www.huawei.com/en/about-huawei/annual-report/2016/foreword.

112 *ETSI Intellectual Property Rights Policy*, April 5, 2017, available at http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf.

113 Shen Zhong Fa Zhi Min Chu Zi No. 857 [2011], 深中法知民初字第 857 号.

114 Shen Zhong Fa Zhi Min Chu Zi No. 858 [2011], 深中法知民初字第 858 号.

FRAND terms when licensing its SEPs for wireless communication technologies. *IDC* should compensate Huawei RMB 20 million in damages.

It should be noted that earlier, in July 2011 *IDC* had filed a patent infringement litigation against *Huawei* at Delaware District Court, alleging that the defendant infringed IDC's patents and asked for preliminary injunction and damages. In addition, *IDC* filed patent infringement litigation against *Huawei* with the US International Trade Commission (ITC), requesting for prohibition from import and sales in the USA.

2. Substantial rulings of the Chinese courts

Both decisions regarding cases 857 and 858 from the Shenzhen Court were appealed to Guangdong Higher People's Court (Guangdong High Court), which made the final judgement in October 2013.[115] The appellate court affirmed the ruling from the Shenzhen Court. The judgement from the Shenzhen Court can be summarized as follows.

2.1 IDC holds a dominant position

Pursuant to Article 12 of the AML and Articles 3 and 4 of the *Guideline*[116] relevant geographic and product markets need to be determined first. Shenzhen Court first defined the relevant product market to be each SEP licensing market for 3G technology standards (WCMA, CDMA2000, and TD-SCDMA). The relevant geographic markets were China and the US. The Shenzhen Court further analysed the interchangeability and possible substitutability of the respective technologies. The Shenzhen Court made the conclusion that due to the uniqueness and non-substitutability of each SEP for implementers, *IDC* possesses 100 percent market share regarding WCMA, CDMA2000, and TD-SCDMA standards for 3G telecommunications technology. Therefore, *IDC* holds without any doubt a dominant position. Guangdong High Court affirmed the market definitions in its published decision.

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115 Guangdong High People's Court, Yue Gao Fa Min San Zhong Zi No. 306 [2013], 粤高法民三终字第 306 号.

116 *Supra* note 72.

2.2 Abuse of dominant position in licensing SEP technology

Pursuant to the AML, dominant position alone does not constitute a violation of the law. Abusive conduct of the dominant market power must be proved. Based on the documents placed before the Shenzhen Court, it was concluded that *IDC* abuses its dominant position because of the following conduct

- Seeking injunctive relief before the US District Court of Delaware and the ITC *during* the negotiations with Huawei and thereby breaching the FRAND commitment
- requiring Huawei to pay much higher royalties than those paid by Apple and Samsung
- tying its SEPs with non-SEPs during licensing negotiations

The Shenzhen Court ruled that *IDC* abused its dominant market position, and should compensate *Huawei* RMB 20 million in damages.

With respect to case No. 857 the Shenzhen Court ruled that the royalty rate payable to *IDC* by *Huawei* should be reduced from 2 percent to 0.019 percent of actual sales price of each product produced by *Huawei*. With this ruling, Shenzhen Court became the very first court in China to determine a FRAND royalty rate. On appeal, the decision from the Shenzhen Court was affirmed by Guangdong High Court.

The court decisions triggered heated debates in the international community. While the Supreme People's Court praised the judgement as one of the "benchmark" cases, the US Chamber of Commerce critised the ruling very strongly and highlighted various irregularities.[117] The major findings of the ruling will now be examined.

3. Comments on main findings of the Chinese courts

It should be noted that out of confidentiality reasons, information about the rulings from the Shenzhen Court was made available only through numerous press release and publicized comments made by relevant judges

117 Critics such as poor reasoning of the judgement, competence of jurisdiction of the courts, etc. were raised. See US Chamber of Commerce, *Competing interests in China's Competition Law Enforcement: China's Anti-Monopoly Law Application and the Role of Industrial Policy*, page 75.

and attorneys involved in the case. But the judgement from Guangdong High Court was disclosed, with sensitive information barred.

3.1 Definition of market dominance by Guangdong High Court

The high court affirmed the conclusion of Shenzhen Court on market definition. Detailed analysis was given in the ruling on definition of geographical and product markets. The definition of product market is decisive here in order to determine market dominance concerning the specific product. In this regard the Guangdong High Court adopted similar approaches as set in the Commission Notice on the Definition of the Relevant Market, in that the interchangeability and substitutability of relevant technologies were carefully analysed. The Court spent lengthy part explaining the characteristics of SEP, which factually forces implementers to seek licenses from the SEP proprietor. In other words, the SEP owner becomes the only supplier of that standard and thus, there is no substitute in the relevant market.

In this context, one needs to be aware of the consequences if a narrower relevant market has been established. The IPR holder tends to be confronted with a domino effect which subsequently leads to reduced possibilities of identifying substitutes in a narrow market. This would even result in a single product market[118], as we can see from the above case. Under such circumstances, a strong market power and dominant position is automatically established.[119]

In the recent ruling from the European Court of Justice (ECJ) on *Huawei v. ZTE* case, however, the Advocate General Melchior Wathelet stated that "… *the fact that an undertaking owns an SEP does not necessarily mean that it holds a dominant position within the meaning of Art. 102 TFEU…*".[120] It seems that the ECJ applied a more careful approach upon assessing dominant position of an SEP holder. It is definitely advisable to examine all the relevant circumstances and the specific context of a case. Market dominance should be evaluated and determined on a

118 Steven Andermann and Hedvig Schmidt: *EU competitioin law and IPR, the regulation of innovation* (2nd edition, Oxford Uni Press, 2011), 45 – 46.

119 *Id.*

120 *Huawei Technologies Co. Ltd. v. ZTE Corp, ZTE Deutschland GmbH,* C-170/13, , [2014] [57].

case-by-case basis. It is not easy to find a middle way to avoid either under-protection or over-protection of an SEP owner. In recent years, a series of decisions in major jurisdictions around the world might give the impression that SEP holders are under-protected. Large amount of penalties have been imposed on various SEP and IPR owners, particularly in the field of telecommunication and software. For instance, *Qualcomm* was fined USD 975 million in 2015 by the Chinese competition authority NDRC.[121] The Korean Fair Trade Commission (KFTC) imposed another penalty on *Qualcomm* in the amount of USD 854 million in December 2016.[122] In another case, the EU Commission imposed a penalty payment of Euro 899 million on *Microsoft* for non-compliance with the Commission's decision in 2004.[123]

3.2 Abuse of dominant position

Based on the evidential materials, the Guangdong High Court found that *IDC* had sought injunctive relief at the Delaware Court and with the ITC to prohibit *Huawei* from using its SEPs during the negotiation process. Injunctions sought in the US against a willing licensee would eliminate and restrict export activities of *Huawei* with the purpose of imposing unfairly high licensing terms. Hence, *IDC* abused its dominant position by breaching the FRAND commitment.

The above ruling seems to be in line with decisions on similar cases in the EU. In the European Commission decision on *Motorola Mobility*[124] released in April 2014, it was stated that *Motorola Mobility* filed lawsuit against *Apple* in Germany based on an SEP, although the latter was willing

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121 *Administrative Sanction Decision from National Development and Reform Commission of People's Republic of China* (中华人民共和国国家发展和改革委员会行政处罚决定书), February 9, 2015, available at http://www.ndrc.gov.cn/gzdt/201503/t20150302_666209.html.

122 Global 500 Reuters News, December 28, 2016, available at http://fortune.com/2016/12/27/qualcomm-korea-antitrust/.

123 European Commission Press Release, February 27, 2008, available at http://europa.eu/rapid/press-release_IP-08-318_en.htm.

124 European Commission Press Release, *Antitrust: Commission finds that Motorola Mobility infringed EU competition rules by misusing standard essential patents*, April 29, 2014, available at http://europa.eu/rapid/press-release_IP-14-489_en.htm.

to enter a license agreement. According to the Commission "*Seeking injunction before courts is generally a legitimate remedy for patent holders in case of patent infringements. However, the seeking of an injunction based on SEPs may constitute an abuse of a dominant position if an SEP holder has given a voluntary commitment to license its SEPs on FRAND terms and where the company against which an injunction is sought is willing to enter into a licence agreement on such FRAND terms.*"

The lawsuit brought by *IDC* at the Delaware District Court and ITC could indeed distort the negotiations process and would lead to anti-competitive licensing terms which could be detrimental to innovation and to the interests of consumers.

3.3 Chinese court sets the royalty rate

Can a court adjudicate pure commercial matters such as royalty level under the circumstances that there is no tort or no breach of contract? In this case, the plaintiff complained about the much higher rate to be paid to *IDC* in comparison with the payable royalties by *Apple* or *Samsung*. Evidential documents showed that the royalty rate to be paid by *Huawei* for the same set of patents would have been nineteen times higher than that paid by *Apple*, and two times higher than that paid by *Samsung*.[125] The Shenzhen Court stated that judicial remedy had to be sought because two parties could not reach an agreement and *IDC* had breached its commitment to licensing the SEPs under FRAND terms.

As to the level of royalties, the Shenzhen Court provided the factors to be considered such as relevant situation in the industry, quantity, quality and value of IDC's SEPs. Decision on a concrete figure was taken pursuant to Art. 4 of the General Principles of the Civil Law, and Art. 5 and 6

125 Li Hui, *Rethinking the Competition Case, Huawei Wins the Lawsuit against IDC* (还原华为反 IDC 垄断案，胜诉背后的反思). The following information was revealed by Huawei's attorney: IDC singed with Apple a global licensing agreement on 3G-patents. Licensing term lasted 7 years which started from June 2007. The licensing fee was in the amount of USD 56 million. IDC's global licensing agreement with Samsung for its 2G and 3G-patents was signed in 2009 and would last for 4 years. Total amount was USD 400 million. For comparable patents IDC asked Huawei to pay USD 1.5 billion. September 29, 2015, available at http://www.maxlaw.cn/l/20150929/830281649635.shtml.

of the Contract Law.[126] However, according to InterDigital's Securities and Exchange Commission filings, the Chinese court failed to provide explanations.[127]

In fact, the Chinese court was not the only one which has set the level of royalty rate. *In the Microsoft v. Motorola* case, the US District Court Western District of Washington at Seattle also set the licensing rate for Motorola's video coding SEP portfolio to *Microsoft*. In the summary judgement from February 27, 2012, Judge Jame L. Robart stated that "*... the court believes that reasonable parties may disagree as to the terms and conditions of a (F)RAND license, leaving the courthouse as the only viable arena to determine the meaning of "reasonable" under the circumstances.*"[128]

3.4 SEP-related controversies

A standard can be defined as a set of technical specifications that seeks to provide a common design for a product or process.[129] Industrial history is filled with examples of rivals agreeing on product standardization for reasons of utility, safety, or cartelization.

Standardization will almost always have some advantages for consumers. Industry-wide compliance to standards is crucial to growth and efficiency. Generally speaking only the best and the most efficient solutions will be adopted as standards. The aggregate positive effect for the economy is significant, and consumers should finally benefit from standards. However, once a standard is adopted, it is not possible to manufacture products that comply with a certain standard without accessing these patents. This may confer significant market power on companies holding SEPs. The consequences would be that standard implementers need a license from the standard holders, who own patents on standard technologies. In the decision on *Huawei v. IDC*, the Guangdong High Court em-

126 Guangliang Zhang et al., *A Review of Huawei v. IDC*, Managing Intellectual Property, March 27, 2015, available at http://www.managingip.com/Article/3440420/A-review-of-Huawei-v-IDC.html.

127 InterDigital 10-Q report, filed October 31, 2013, available at http://www.snl.com/Cache/c34365872.html.

128 *Microsoft Corporation v. Motorola, Inc., et al.*, C10-1823JLR (2012).

129 H. Hovenkamp et al: *IP and Antitrust: An Analysis of Antirtust Principles Applied to Intellectual Property Law*; Sect. 35.1 (Supp. 2003 -04).

phasised that "*the monopolistic power conferred by the patent regime is greatly strengthened due to the mandatory character of the technology standard*".

The general concern regarding the "locked-in" effect caused by a standard to which an implementer chooses to adhere was clearly delineated in the ruling on *Broadcom v. Qualcomm* case. *"Industry participants who have invested significant resources developing products and technologies that conform to the standard will find it* ***prohibitively expensive***[130] *to abandon their investment and switch to another standard. They will have become "locked in" to the standard. In this unique position of bargaining power, the patent holder may be able to extract supra competitive royalties from the industry participants.*"[131]

As elaborated above, SEP owners as licensors indeed possess more bargaining power vis-à-vis licensees and can thereby impose excessive high royalties and more favourable conditions for themselves. Particularly in telecommunications we see giant companies like *Qualcomm*, *Samsung* and *InterDigital* with a huge patent portfolio. It is noteworthy that *InterDigial* has no production, and licensing business is the only source of its revenues. It is also common knowledge that *Qualcomm's* licensing business is far more profitable than earnings from manufacturing the chipsets. Yet, it is fair to say that the *ex post* benefit of becoming a "trend-setter" drives companies to invest a huge amount of their capital in innovation. The *ex ante* sunk capital in research can barely be numbered. This needs to be taken into account by competition enforcers when assessing anticompetitive conduct.

Adoption of a technological standard *automatically* grants SEP owners access to downstream markets. Their market power conferred by patent law is therefore extended via licensing agreement with the implementers. While manufacturers and implementers are trapped in the standard, SEP holders may start to put pressure on licensees and try to impose their terms and conditions. Most SSOs have rules to curb this problem and generally require their members to commit to licensing SEPs on FRAND terms. This commitment is meant to ensure access to standards for all market participants to prevent hold-up by a single SEP owner. In spite of the

130 Emphasis added.

131 *Broadcom Corp. v. Qualcomm Inc.*, [2007], 501 F. 3d 297.

above, the number of litigations on FRAND licensing terms is constantly increasing in major jurisdictions worldwide.

Patent hold-up issues may also cause royalty stacking problem. This is partly due to expansion and strengthening of IPR protection. More importantly, the complexity of an advanced technology requires incorporation of a multitude of complementary technologies. The patent system creates a sort of *patent ticket*, whereby an overlapping set of patents forces market participants seeking to commercialize new technologies to obtain licenses from multiple patentees.[132] Standard adoption process by which cooperative standards are typically set, and the *ex post* potential of anti-competitive market power conferred on SEP holders may indeed lead to controversial situations. Taking smart phones as an example, Lemley and Shapiro stated that they had "seen estimates [for W-CDMA] as high as 30 percent of the total prices of each phone… based on summing royalty demands before any cross-licensing negotiations began."[133] Even according to a more conservative estimate, cumulative royalties for GSM for companies not possessing any patents to trade stood at 10-13 percent.[134] The terms and conditions in a licensing agreement between SEP owners and licensees will eventually impact consumes interests.

The above discussions were concentrated on the downstream market. But this is only one side of the story. Companies invest large amounts of capital in R&D before their pioneering technologies can be incorporated in the standard. Only if innovators can recoup their investment, will they take further risks and engage in further technological development. Sufficient protection should be accorded to innovators, which is the very purpose of patent regime. Recent studies on upstream markets revealed a few interesting aspects. The main interest of standard owner is to constantly upgrade standards so that a complete replacement becomes difficult. This can result in large numbers of patent portfolios building around the stan-

132 Carl Shapiro, "*Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standards Setting"*, in Adam B. Jaffe, Josh Lerner and Scott Stern (eds), *Innovation Policy and the Economy*, Vol. 1, MIT Press, 2001.

133 *Id.*

134 Eric Stasik: *Royalty Rates and Licensing Strategies For Essential Patents On LTE (4G) Telecommunication Standards*; Royalty rates for Telecommunications, September 2010.

dard.[135] The other side of the coin is that standard implementers do not need to have excessive concerns about the "locked-in" effect of their sunk investment in developing complementary products and other commercialization activities.[136] Empirical experience shows that discontinuation and replacement of the set standard does not take place very often.

Furthermore, a single owner of SEPs is apparently in a better position to internalize returns from essential patents, or acting as platform leader to promote and sponsor the relevant standard. Fragmented ownership of SEPs encourages free-riding and decreases incentives of further investment by the standard setters.[137] In addition to the aforementioned points, it is also important to keep the specific characteristics in the new economy in mind. Emergence of giant companies and dominant market shares of one player is also owed to the natural consequence of the "network" effect, which characterizes our digitally interconnected environment. In the *Microsoft* decision in 2007, the European Commission seems to be skeptical of the network effects prevalent in the new economy and regard it as an unjustifiable barrier to entry. There are arguments that artificially fragmenting the market will likely damage the efficiency of the industry and ultimately consumers have to bear the costs.[138]

The above findings have important implications for competition agencies and judicial bodies. In order to properly instate the competition law as a countermeasure against abuse of IP right, it is vital to recognize dynamic efficiency brought by innovation in certain high-tech industries. We all acknowledge that innovation should be promoted, but it is difficult to make judgement on future welfare effects for the society. Enforcers could apply the concept of *dynamic competition* relying on facts that characterize competition in the relevant markets.[139] "This approach enables competition law enforcers to apply an *ex post* assessment to the greatest extent possi-

135 Justus Baron et al., *Essential Patent and Standard Dynamics*, March 15, 2013, available at https://www.law.northwestern.edu/research-faculty/searlecenter/innovationeconomics/documents/Essential_Patents_and_Standard_Dynamics_2013.pdf.

136 *Id.*

137 *Id.*

138 *Supra* note 91.

139 Josef Drexl: *Is there a 'more economic approach' to intellectual property and competition law?* Research Handbook on Intellectual Property and Competition Law, (Edward Elgar Publishing 2008) 40.

ble".[140] In summary, advanced technologies have posed competition authorities a formidable task. New analytical approaches need to be adopted when assessing IP-related anticompetitive conduct.

C. Possible Ways Ahead

The judicial decision on *Huawei v. InterDigital* is one of the landmark decisions on interface between competition policy and intellectual property. This case touched upon various issues such as definition of product market, abuse of dominant position and SEP licensing under FRAND terms. Furthermore, Shenzhen Court marks the first Chinese judicial body setting a royalty rate for licensing practice.

The definition of product market in this case seems to be in line with international practice, which also found reflections in the decision on *Qualcomm* issued by NDRC in 2015. As stated in the judgement from Guangdong High Court, there is deep concern on the extended market power possessed by an SEP holder. However, the level of royalty rate set by the court, which was rather low, might also impact Chinese SEP holders such as *Huawei* and *ZTE*. As to the breach of FRAND commitment, it would have been necessary for the courts to carefully evaluate which party was responsible for the failure of negotiations. Because this point was vital for determining the abuse of dominant position, detailed reasoning should have been presented by the courts. Yet, in the judgement there were only general findings that court proceedings had been initiated by *InterDigital* during the negotiation process.

Furthermore, controversy on industrial policy concern was aroused by the statements from the Chief Judge of the second instance court:

> *"Huawei's success in the anti-monopoly lawsuit is quite meaningful. Qiu Yongqing, the Chief Judge of the Guangdong Higher People's Court believes that Huawei's strategy of using anti-monopoly law as a countermeasure is worth learning by other Chinese enterprises. Qiu suggests that Chinese enterprises should bravely employ anti-monopoly lawsuits to break technology barriers and win space for development"*[141]

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140 *Id.*

141 He Linping, et al, *Monopoly Dispute: Chinese Enterprise Won against American Giant* (垄断纠纷：中国企业打败美国巨头), available at http://news.163.com/13/1028/21/9CA9N4JN00014JB6.html.

It is the goal of the Chinese government to encourage development of advanced technologies and to make China a strong IP country. With increasing awareness of applying competition law to abuse of IP rights in China, it could be expected that more enforcement actions on the interplay between competition policy and IPR will occur in the future.

Apart from all the above, this case also illustrates certain inherent conflicts between standard setters and standard implementers. The increasing number of litigations in the telecommunication field worldwide is indicative that FRAND obligations set by most SSOs may not be sufficient. The concern on *ex post* market power conferred by SEPs and the unpredictability of costs for standard implementers partly lies in the unpredictable nature of licensing fees.[142] Maybe it is time to consider additional *ex ante* binding commitment for standard setters.

142 Damien Geradin et al., *The Logic and Limits of ex ante Competition in a Standard-Setting Environment,* Competition Policy International, Vol. 3, No. 1, 2007.