

Challenges to the Disclosure and Licensing of Standard Essential Patents in the Context of Evolving Trends in ICT Technologies

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Abstract

Describing the importance of Standard Essential Patents in fostering innovation and development in Information and Communication Technologies, the article traces the implications and interpretations of the Fair, Reasonable and Non-discriminatory (FRAND) Agreement and emerging issues in the context of Standard Essential Patents in the United States, Europe and China through a brief analysis of recent judicial pronouncements—Microsoft v. Motorola, Apple v. Motorola and others—and systems.

Introduction

The new age, with global interconnectedness as its characteristic feature, is assisted and achieved by standards. Patented technologies that enable devices and machines to communicate effectively with each other act as building blocks for these standards. These technical standards ensure connectivity, and the patents protect the inventor's rights to such technology, especially ICT (Information and Communication Technologies) including those for battery mode solutions, data transmission, and carrier aggregation.

Technologies protected by patents that are essential to standards are called standard essential patents (SEPs). 'Standard' here refers to a standard derived from technical specifications for specific technologies, such as radio technology (Li 2016).

Standards are typically developed by Standard-Setting Organizations (SSOs), such as 3GPP (3rd Generation Partnership Project) which is a consortium of such SSOs and is responsible for setting standards for telecommunication technologies such as LTE for 4G networks.

There are important differences between SEPs and non-SEPs, which stem from the very fact that SEPs involve patents that are indispensable for the implementation of technology standards, and that they are not governed only by the Patents Act, but by the contractual aspect of Fair, Reasonable and Non-Discriminatory (FRAND) (Tyagi and Chopra 2017). The other difference between non-SEPs and SEPs is that SEPs have additional declaration information, such as:

- SEPs that have been declared at SSOs will have a declaration number (InQuartik 2021).
- The technology covered under SEPs is mapped to its declared technical standards or specifications (Ibid.).

An SEP owner is entitled to be rewarded fairly for their invention and to seek injunction against the use of their patent without a licence in a particular jurisdiction; these entitlements need to be balanced with the need to ensure fair competition through consistent interoperability. In order to achieve this balance, SEP holders are bound by SSOs to offer their standards on Fair, Reasonable and Non-Discriminatory (FRAND) terms in exchange for royalties. However, the meaning and scope of the concept is subject to constant reinvention and reinterpretation given the dynamic nature of the field. Further, the terms of patent enforceability can limit international interoperability. When interoperability is then to be actualized, and relevant standard essential patents are to be made available for international operation, the jurisdictions of multiple nations must operate under common constraints.

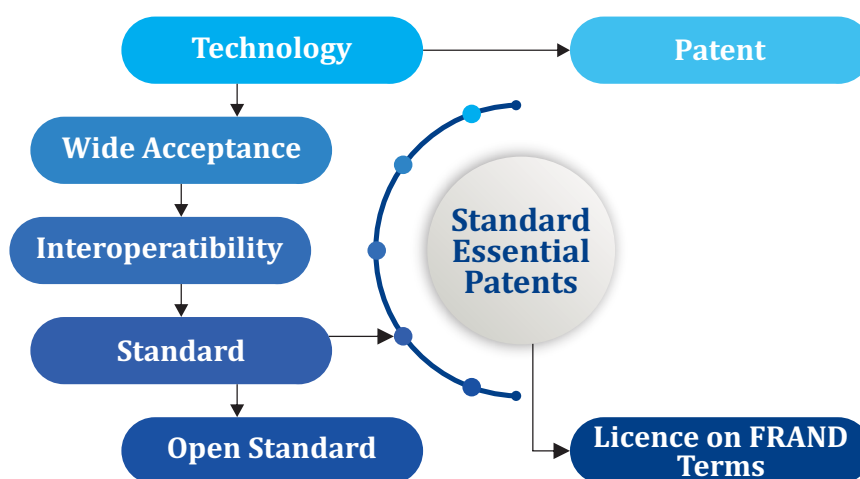


Figure 1: Flowchart showing the evolution of SEPs
(Source: Tyagi and Chopra 2017)

In what follows, recent trends in SEP enforcement are traced for three territories: the United States of America, Europe, and China. Familiar issues such as hold-ups, hold-outs and anti-competitive behaviours are identified, along with unfamiliar, emerging tendencies that are positioned to shape the direction of SEP enforcement practices across the world in the near future.

FRAND licensing, challenges and the American approach

With the advent of standardisation, India can claim to be the second largest in the world in the mobile telephony market, in addition to being the fourth largest in Asia in mobile infrastructure. A study shows that 1 percent increment in broadband penetration has a direct impact on the growth in registrations of new businesses by approximately 3.8 percent (Tyagi and Chopra 2017). Furthermore, according to research conducted by British Standards, the standards can contribute as much as 0.3–0.9 percent to the nation's Gross Domestic Product (GDP) (Ibid.).

It is in the above context that there is an urgent need for India to address the challenges related to developing a conducive and robust IPR regime that encourages and rewards innovation, as well as ensures recognition by introducing appropriate alterations at the policy level that are capable of converting 'unwilling licensees' into 'willing licensees' (Tyagi and Chopra 2017).

The significance of FRAND licensing within the context of SEPs

Primarily, the policy objectives that feed into SEP licensing resemble those for other patents. Patent law envisions encouraging technological advancements by benefiting inventors, while also attempting to safeguard the public domain by ascertaining accessibility to patented technologies. Therefore, the range of the patents that are granted to patent-holders needs to be sufficient enough so as to be able to incentivize them for their forward-looking contributions, but not such as to allow the patent-holders to take possession of an entire technological field, thus discouraging follow-up inventions that may make use of the same patented features.

However, SEPs are different from other patents in the sense that a major part of their worth is drawn from an across-industry consensus of adopting the patented technology constituting an interoperable standard. Such standards were often developed because of collective efforts made by various members of the industry and were adopted only after the SEP-holders' commitment to FRAND licensing (Contreras 2015). Once the industry adopts the standard, non-SEP-holders then often operate with the assumption of the SEP's availability for a licence and invest considerable resources to include the patented technology as a part of their products (Contreras 2015). Hence, it would be obtrusive to provide an SEP-holder the right to exclude its competitors from entering related technological fields altogether, as is usually provided by a particular patent.

Moreover, even when an SEP-holder honours the commitment of licensing its SEP patents, there may still be an exercise of leverage of an unjustifiable amount in the post-adoption phase of negotiations. An SEP-holder could, therefore, essentially monopolise the entire field of technological advancement by asking for unreasonably high royalties. Consequently, a non-SEP holder would then be confronted with the option of either agreeing to excessive licensing fees or of stepping out of the technological field altogether, which could be after having spent millions of dollars on developing products which featured the required SEP property (Chien

2014). A considerable number of SSOs have, as a result, adopted FRAND policies to keep SEP-holders from adopting this kind of unjustified leverage.

It is in this context that businesses that develop SEP-encumbered products must face challenges given the evolving trends in ICT technology. These challenges can be broadly categorised into three domains: hold-up, hold-out and royalty pricing.

Hold-Up

SSOs often need their members to extend offers to licence as well as disclose patents under the terms of FRAND to restrict SEP owners from ‘holding up’ patented technologies in the case of ex-post licensing agreements (Li 2016). With respect to post-Rambus cases, the Indian judiciary has almost always enforced a FRAND agreed-upon term by both the SSOs and SEP owners as being legally binding in nature (Li 2016). Such a course of events reflects that SEP owners who have entered into a FRAND commitment are not in a position to exercise the extent of control over their SEPs which may otherwise be exercised by patent-holders normally.

However, given the paucity of lucid guidelines with regards to what constitutes ‘fair and reasonable’ licensing, individual SEP-owners could still be able to retain substantial leverage when it comes to negotiating exorbitant royalty rates when the standard that includes the SEP has been adopted widely (Lemley and Shapiro, 2007). Implementers of SEP may therefore, confront the complex choice of either consenting to the SEP owner’s impractical asks or exiting a particular technological field completely. SEP-holders can thus develop a functional ‘hold-up’, obstructing technological and industry growth due to it being excessively expensive for other actors to attain the licences required for operating within that technological capacity.

Hold-Out

FRAND licensing should adequately diminish an SEP owners’ right to disbar and restrict its post-adoption agreement leverage, but the SEP owner should also be protected from patent infringement because of people who may be reluctant to work out a FRAND licence. In case an SEP owner is prevented from obtaining injunctive relief because of FRAND commitments, it does not provide a remedy that is robust enough to enforce the rights as damage awards often get capped at the level of FRAND royalty decided in the case of infringement (Li 2016). Ambitious implementers may hence, determine to ‘hold-out’ from the procedure of licensing negotiations, being cognisant of the fact that the maximum reprimand is simply what should have been paid for licensing itself initially (Li 2016). Regulating institutions have identified the issues initiated by these ‘hold-outs’, otherwise known as ‘reverse hold-up’ scenarios, and courts have usually sustained an SEP owner’s capacity to ask for injunctive relief (Li 2016).

Royalty Pricing

The judicial system has substantially provided that a FRAND rate must be drawn from the incremental value of the patented attribute, but there is still uncertainty with respect to the manner in which an SEP’s value is to be properly apportioned in relation to the worth of the whole SEP-enabled technology².

¹Rambus v. FTC, 522 F.3d at 466 - Rambus was initially committed to join the Joint Electron Device Engineering Council (JEDEC), an SSO-developing dynamic random-access memory (DRAM) standard. Before JEDEC approved one of its standards covered by Rambus’s SEPs, however, Rambus withdrew from JEDEC and thus evaded its obligation to commit to the SSO’s patent policy. Rambus offered to license its SEPs to several memory chip manufacturers, but while some agreed to its royalty demands, others did not and instead elected to sue. Although Rambus’s failure to disclose its pending patent applications led to fraud and antitrust claims, the Federal Circuit reversed a district court’s finding that Rambus had committed fraud and the D.C. Circuit reversed the FTC’s holding that Rambus had violated antitrust laws.

²Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1226 (Fed. Cir. 2014)

In addition, a specific technology may involve hundreds of disparate patents, leading to ‘royalty stacking’ challenges³. For instance, research carried out in 2011 by a patent aggregator RPX noted that there are over 250,000 patents related to an average smartphone (Li 2016). Therefore, even though the rate of royalty for an SEP may seem reasonable in itself, interested people may end up spending on hundreds of licences in order to operate the relevant standard. Furthermore, SEP owners may even transfer this royalty burden onto the consumers, driving the end product price upwards to an unsustainable level. The challenge of royalty-stacking has resulted in an argument relating to how the royalty base is to be calculated for properly addressing the inputs of individual patents when it comes to a particular end product (Li 2016).

This argument is aided by two opposing considerations. On one side of the spectrum, there is the problem of ‘over taxation’, which refers to an exorbitant royalty fee that is based on the end product’s price and may end up over-burdening the licensee, ultimately over-burdening the end consumer. The other side comprises the concern of ‘under reward’ which implies a minor royalty charge that is related to the SSPPU (Smallest Saleable Patent Practising Unit), and may not accurately depict the technological inputs of an SEP and under reward, by extension, the SEP-holder for its input to the end product’s value (FTC 2011). Therefore, what is evident is that FRAND licensing terms have developed new considerations that directly impact the high-level decision-making of businesses in technology development.

USA’s approach to Hold-Up and Hold-Out issues

Legal issues relating to FRAND licensing have become common in most countries with high technology industries, given the global market for interoperable technologies. Most jurisdictions are converging on how they want to address these issues i.e., ensuring that they maintain a delicate balance between preventing SEP holders from gaining excessive leverage in post-adoption negotiations and incentivizing potential SEP owners to innovate.

In the United States, hold-ups have been prevented by the courts by treating an SEP holder’s agreement with an SSO to licence its SEPs according to FRAND terms as a legally-binding contract. Further, courts have held that a FRAND commitment follows an SEP and is not severable even upon a transfer of ownership (Li 2016).

Since a FRAND commitment is considered to be a legally-enforceable contract, an SEP owner’s violation of its FRAND obligation is considered to be a breach of contract and the SEP implementer may be entitled to damages. *Microsoft Corp. v. Motorola, Inc.* (“Microsoft”)⁴, discussed below, is an example of this approach.

a. Microsoft v. Motorola

In October 2010, Microsoft sued Motorola for breach of contract when Motorola refused to license out its smartphone patents to Microsoft in accordance with its RAND obligations to the International Telecommunication Union (ITU) and the Institute of Electrical and Electronics Engineers (IEEE). Microsoft later amended its complaint, bringing a distinct breach of contract claim against Motorola for suing it in Germany. Motorola had sued Microsoft for patent infringement and had sought an injunction against Microsoft in Germany⁵. The district court found that Motorola’s FRAND commitment created binding contracts enforceable by Microsoft, as a third-party beneficiary of the contract⁶. At trial, the jury held Motorola liable for breach of contract, awarding 14.52 million USD to Microsoft.

³ See *In re Innovatio IP Ventures, LLC*, No. 11 C 9308, 2013 WL 5593609, at

⁴ 10 (N.D. Ill. Oct. 3, 2013); *Ericsson v. D-Link Sys.*, 773 F.3d at 1209.

⁵ *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024 (9th Cir. 2015)

⁶ *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d at 1033

⁷ *Microsoft Corp. v. Motorola, Inc.*, 854 F. Supp. 2d at 999 (W.D. Wash. 2012)

Upon appealing, the Ninth Circuit sustained the jury's grant of damages as per the considerable evidence standard of review as Motorola's steps reflected that it breached its responsibility of good faith as well as fair dealing. During September 2015, the en banc hearing was refuted by the Ninth Circuit for reconsidering its decision, thus rendering its decision as being final.

The Microsoft decision of Ninth Circuit has two critical implications. Both of these connotations work towards the reduction of an SEP owner's capability of engaging in hold-up: (1) affected third parties enforce the FRAND obligations of an SEP holder in the form of a binding contract; in addition, (2) a counterclaim for breach of contract may be filed by an implementer-defendant against an SEP owner who attempts to hold up SEPs and be awarded substantial damages. Therefore, an SEP owner may be discouraged from strongly asserting the FRAND-committed patents through the process of seeking either large royalties or injunctive consolation. It was, however, carefully noted by the Ninth Circuit that the jury in the Microsoft case was 'instructed that seeking injunctive relief was not a per se violation of the RAND commitment . . .'.⁷ The refusal of the court to provide a default rule restricting FRAND-committed SEP-holders from asking for injunctive relief in opposition to patent-infringers is supportive of a policy that discourages opportunistic implementers in their quest to hold out of attaining FRAND licences.

b. Apple v. Motorola⁸

In fact, the Federal Circuit in the case of Apple Inc. v. Motorola, Inc., here on referred to as 'Apple', disregarded a closely resembling per se rule, asserting that even when it came to the context of FRAND, the presence of injunctive relief needs to be based on the four-factor test⁹ outlined by the apex court in the case, eBay v. MercExchange¹⁰. The Apple decision of the Federal Circuit is pertinent because it essentially dissuades uncooperative licensees from holding out on attaining FRAND licences from SEP owners.

The cases of Microsoft and Apple exemplify how the American justice system handled the issue of balancing the rights of SEP-holders as well as those of implementers when addressing the challenges of hold-up and hold-out. While once an SEP is committed by a patent-holder to FRAND licensing, there is prohibition from holding up the technology that has been patented, thus posing a risk of liability for breaching of claims stated in the contract if there are unreasonable demands of licensing fees or seeking of injunctive relief. However, these decisions prevent implementers from essentially holding out from licensing debates as injunctions could still be handy as per the eBay test.

FRAND trends in Europe

European jurisprudence has seen sharp shifts in locating dominance, while also placing itself at the forefront of emerging trends in the SEP landscape. Starting from 2009, this section aims to trace the big shifts and trends up till 2020.

The Orange Book¹¹ judgement by the German Federal Court of Justice in 2009 stated conditions under which a potential licensee, under EU and German law, would be able to use a competition law defence against a potential injunction. Effectively, the judgement placed very high demands on the potential licensee. Only after a potential licensee had made an irrevocable, unconditional offer (where an 'unconditional offer' was taken to mean that the validity and infringement of SEPs were not to be challenged) under FRAND terms, and had also begun to make payments (in escrow or through royalty fees) as though the use was licensed, could the SEP holder even be seen as abusing the dominant position. In case the amount of payment was disputed, the potential licensee would need to offer to pay a licence fee that the SEP holder decided on,

⁷Microsoft Corp. v. Motorola, Inc., 795 F.3d at 1045 (9th Cir. 2015)

⁸Apple, Inc. et al. v. Motorola, Inc., et al., Case No. 12-1548; -1549 (Fed. Cir., April 25, 2014)

⁹The 4 factor test requires a plaintiff to demonstrate: (1) that they have suffered an irreparable injury; (2) that remedies available at law are inadequate to compensate for that injury; (3) that considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

¹⁰eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388, 389 (2006)

¹¹KZR 39/06 of 2009

although subject to court review. At this point, the rights of an SEP holder were given tremendous weight, and hold up was not a serious consideration.

In 2012 however, the European Commission sent a Statement of Objections to Samsung, containing a ‘preliminary view’ that its actions to seek injunctions against Apple in multiple instances where Apple had shown willingness to license on FRAND terms had constituted an abuse of dominant position (European Commission 2012). By this time, the demands on willingness were being made much weaker than the Orange Book standard made them, thus making injunction less accessible. The European Commission had begun to develop a standard wherein a ‘willing licensee’ was one that would give a declaration to be bound to royalties through litigation, to then enter a ‘safe harbor’ (European Commission 2012). The licensee could also challenge the validity and infringement of SEPs.

Importantly, in *Huawei Technology Co. Ltd v ZTE Corp*¹² in 2015, a balance between the rights of the SEP owner and the implementer was introduced to try and identify instances of abuse of dominant position in a more nuanced manner. Huawei alleged that ZTE had infringed its SEPs in Germany, had declared its irrevocable willingness to license on FRAND terms to ETSI¹³, and the patent suit had been declared essential by ETSI. The Court of Justice of the European Union (CJEU) held that this ‘creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licences on such terms’¹⁴ that made the refusal to grant a licence close to abuse. Notably, refusal to license on FRAND terms would have been capable of invoking abuse under Article 102 of the Treaty on the Functioning of the European Union (Vaisanen 2011). Further, conditions under which abuse would not be found began with the SEP holder alerting the potential licensee that infringement had taken place, recognizing that the latter may reasonably not know of their infringement. Next, once the potential licensee expressed ‘willingness’ to enter a FRAND agreement, the SEP holder would have to present a written offer with methods of calculation of royalties. Next, the potential licensee would need to respond ‘diligently’ in accordance with ‘recognized commercial practices’ ‘without delaying tactics’ and in ‘good faith’¹⁵. Importantly, conditions that may define willingness on the part of the potential licensee were fleshed out at this point. Next, the potential licensee would need to submit a written counter offer that was FRAND. Additionally, using teachings of SEPs without the conclusion of an agreement would place a burden on the potential licensee to provide security (bank guarantees or deposits in escrow) ‘from the point at which its counter-offer is rejected’¹⁶. Finally, when an agreement cannot be reached, the parties can have an independent third party set FRAND terms. Furthermore, the right to appeal the validity of SEPs would need to be held in the ‘public interest’¹⁷. The decision placed constraints on both the SEP owner and the potential licensee.

Producing a dramatic turn towards the need for safeguards against hold out, *Unwired Planet International vs Huawei Technologies*¹⁸ reveals the potential for abuse of position at the hands of implementers. Unwired Planet (hereafter Unwired) had been a product company, only to lose its share of the market following the onset of smartphones. It went on to become a non-practicing entity (hereafter NPE) with its potential licensees being much larger companies like Apple, Google and Samsung. These companies were not just in a vertical relationship with Unwired as potential licensees, but as owners of their own patent portfolios as well; they were also in a horizontal relationship with Unwired as competitors. Unwired had purchased over 2,000 patents from Ericsson, with whom it would share future benefits. Samsung, Huawei, and similarly big players then were in a position to simply wait for Unwired to run out of funds to sustain itself, given that it had no sources of revenue other than patent licences (Mesel 2018). Hold out, then, can represent not only an unwilling potential licensee, but also anti-competitive

¹²*Huawei Technologies Co. Ltd v ZTE Corp., et al., Case No. C-170/13 (July 16, 2015)*

¹³The European Telecommunications Standards Institute (ETSI), which is a French association formed in 1988, has adopted an intellectual property rights (IPR) policy and contractual framework governed by French law. ETSI is recognised as the SSO in the European Union telecommunications sector.

¹⁴*Ibid.*, 9. ¹⁵*Ibid.*, 9. ¹⁶*Ibid.*, 9. ¹⁷*Ibid.*, 9.

¹⁸UKSC 37 2020

intent exceeding the scope of licensing term negotiations as well. Indeed, NPEs in general were shown to be at a particular risk of domination through hold out.

The same judgement in *Conversant v Huawei and ZTE*¹⁹ dealt with the issue of jurisdiction of UK courts, specifically the question of the exercise of the court's jurisdiction in determining global FRAND terms and with making Huawei enter a worldwide licence to avoid injunctions in the UK. Huawei maintained that it would have to compromise the rights to challenge the validity and the SEP statuses of foreign patents in other jurisdictions, and the scrutiny that these patents could and should ideally receive would thus be compromised. Further, UK courts were setting terms that foreign courts could make different decisions on, denying commercial actors the option to negotiate horizontally. However, the court reasoned that when faced with the uncertainty of the SEP statuses of some patents within a large portfolio, an implementer is able to still buy a degree of certainty by committing at once to an entire portfolio with a range of SEPs. Further, the ability to challenge individual patents in other jurisdictions remained available, to whatever degree the implementer had previously found the option practical. Importantly, the position to enforce ETSI contracts on patents in the UK gave the court jurisdiction. Additionally, on issue two of *forum non conveniens*, on whether Huawei (China) and ZTE (China) should have been left out of the proceedings, the court reasoned that in the absence of at least an agreement by all parties, that it should be the Chinese courts that must decide; thus the jurisdiction of the Chinese courts could not be established. UK courts, however, needed to adjudicate on injunctions for UK patents. Additionally, on the scope of remedies, the court reasoned that the grant of an injunction and not payment of damages was essential since, from the point of view of the SEP owner, the cost of both negotiating licence terms and carrying out proceedings to enforce its rights for each patent in each country would be 'impossibly high'²⁰. Hence, the concerned party would have incentive to continue infringing until they were compelled to pay royalties, likely a long and comfortable wait for said party, and consequently an incentive to avoid FRAND licences altogether. Accordingly, the court found it appropriate to issue an injunction against the willingness to enter a worldwide licence instead of assigning damages and adding to the costs of operating in the UK. Importantly, the injunction would apply to essential, valid and infringed patents as per UK law. The coercion involved in making the implementer accept global licences was then found to be the only way to ensure the licences were FRAND. This reasoning was also found to be consistent with restraints on the abuse of dominant position by the SEP holder, since current jurisprudence dictated that they could not apply for an injunction unless they were willing to offer terms that the courts deemed FRAND.

On the charge of discrimination, Huawei wanted an interpretation of the non-discrimination leg in FRAND that meant the most favourable of the terms given to other licensees would apply for all like situations, unless objective grounds for a difference in situations could be identified. This would mean that the significantly lower royalty rates previously offered to Samsung (a 'fire sale'²¹) would need to apply. Unwired employed three lines of defence. It argued that the previous Samsung license was not comparable, that the interpretation of non-discrimination would need to include a 'true value'²² for the SEP being offered, and a difference in outcome would need to be justified based on EU competition law (Article 102 TFEU). The court ruled that the non-discrimination clause was 'general' and not 'hard-edged'²³ in the way that Huawei had interpreted it, and that the FRAND requirement had to be read as a single, composite whole with the non-discrimination leg. This would ensure the fair and reasonable elements are determined without regard for the characteristics of individual licensees, along with a single royalty price list available to all. The court also pointed out that ETSI had previously rejected the 'most favourable licensee'²⁴ interpretation. Accordingly, a previous rate may not represent the value of a licence.

¹⁹ UKSC 37 2020

²⁰ *Ibid.*

²¹ *Ibid.*, 11.

²² *Ibid.*, 11.

²³ *Ibid.*, 11.

Notably, the court was concerned about including the variety of ways in which discrimination has a positive impact on competition. The court acknowledged that a first mover advantage may mean a value lower than the real value of an SEP portfolio may be offered initially, the advantage becoming meaningless if subsequent offers are to match the first. Also, ‘fire sales’²⁵ to ensure survival by an SEP owner, as in the case of the Samsung licence referenced in the judgement, would be made untenable if the same terms were offered. After acknowledging that differences in individual offers in individual circumstances were capable of being desirable, the court finally decided that the value of an SEP license calculated without regard for the characteristics of individual licensees meets the obligation to treat like cases alike and hence achieves the non-discrimination requirement. On one hand, reasoning that relies on the value of an SEP divorced from the characteristics of a licensee lies strongly on the side of fairness. However, the court’s reasoning relied heavily on seeing the boundaries of non-discrimination relying on competition law. An interpretation that treats non-discrimination in a non-prescriptive, narrow way may be capable of both promoting the desirable varieties of discriminatory treatment, but also the undesirable ones, and risks saying what is intuitively incredibly convincing, but only by saying too little. However, the requirement that a single royalty price list be made available to all adds significantly to the demands of transparency, and is capable of making FRAND negotiation processes far more meaningful. Interestingly, in *Samsung v. Unwired Planet*²⁶ in 2016, Huawei had argued that after the transfer of over 2800 patents and patent applications to Unwired, license terms offered would have to be consistent with terms previously used by Ericsson and not just with terms used in other Unwired licenses as part of the non-discrimination requirement. The court had agreed, saying Unwired should not be able to ‘obtain more favourable terms from its licensees than Ericsson could itself have obtained.’²⁷ It then becomes meaningful to ask how big a difference in consistency would indeed invoke requirements for similar terms.

The question of abuse of dominant position under Article 102 of TFEU remained. The judgement, invoking the *Huawei Technology Co. Ltd v ZTE Corp* standard, found Huawei had only offered terms that were qualified in unreasonable ways (requiring that only patents valid and infringed be part of licensing, that only a UK portfolio could be made part of a licence). However, Unwired had also provided key terms of its FRAND offer a few weeks after proceedings began in the High Court, and Huawei never made an unqualified offer to accept. On the matter of proceedings being brought forth by Unwired before FRAND terms were offered, the court held that the nature of notice would depend on the circumstances involved, introducing flexibility in interpretation of requirements for consent, and taking Unwired’s side.

Despite the Court of Justice of the European Union being a common platform across the EU, significant substantive differences in laws as well as procedural differences in adjudication remain. Countries such as Germany, Austria, and Hungary assess infringement and validity in separate courts. Many countries do not have special patent courts with technically-qualified judges, and the time taken to adjudicate varies greatly as well (Stach et al. 2015). A Unitary Patent System, meanwhile, is set to begin in the second half of 2022 (EPO nd) from which the UK has withdrawn (UPC 2020). Litigation is expected to be made simpler and less costly, and coordination for other jurisdictions simpler as well. In the move towards worldwide licences, the Unitary Patent System would prove useful and promises a common platform both within and outside Europe.

²⁴*Ibid.*, 11.

²⁵*Ibid.*, 11.

²⁶[2016] EWCA Civ 489

²⁷[2016] EWCA Civ 489

Emergence of China: SEPs and FRAND

China started its Intellectual Property trajectory as a latecomer in the Information and Communication Technology (hereafter, ICT) market but over the years it has managed to surpass major competition to be the powerhouse of patent filing in the world. The World Intellectual Property Indicators 2020, a report by the World Intellectual Property Organization (WIPO) indicated that its China office received the highest number of patent applications annually since 2011. In 2019, China filed 1.4 million patents, which was 43.4 percent of all patent applications and twice of that filed by the United States for the year. It was the first time since 1978, when WIPO's Patent Cooperation Treaty System was adopted, that the US did not file the highest number of International Patent applications. It was bettered by China with 58,990 applications to its 57,840 (WIPO 2020).

The IP protection system in China has gained in strength and efficiency from consistent legal and administrative reforms—gradual increase in damages, swift judicial processes, IP specialist judges, automatic injunctions and patentee-favouring rules. By the end of 2019, there were more than 100 Standard Essential Patents infringement cases being heard under the Chinese IP protection system, most of which were in regards with telecommunication. The Chinese cell phone manufacturing industry, producing 9 out of every 10 new phones in the world, is one of the most important reasons for the hike in cases and patent filing. Another reason could be the shift from a traditionally labour-intensive economy to a service and enterprise based economy which mandates higher levels of standardizations—more 4G related patents than 3G (Managing IP 2019). The developments in China, in the context of standardisation for ICT, may emerge as a challenge to other economies guiding and structuring the future pronouncements and frameworks for FRAND-based SEP usage across the world.

Analysis of SEP litigation in China

China is a civil law system with only two major binding authorities—the law and judicial interpretations of China's Supreme People's Court (hereafter, SPC). The laws pertaining to SEPs are the contract law, the Patent law, the Anti-Monopoly law and the Standardisation law. These laws, along with Interpretation Concerning Certain Issues on Application of Law for Trial of Cases on Disputes over Patent Infringement by the SPC, are used for SEP litigations. Under the Chinese legal system, the interpretation of the SPC alone is binding to all the courts, the guidelines by the High People's Court (hereafter, HPC) are not binding to any lower court. Nevertheless, the guidelines of the HPC are used in pronouncing judgements, although they are not cited. Therefore, many additional instructions such as Guidelines for Patent Infringement Determination, 2017 by the Beijing HPC and Work Guidelines on Adjudicating Cases of Disputes over Standard Essential Patents (Trial), 2018 by the Guangdong HPC are also a part of the IP protection systems. Case laws from across the world such as *Unwired Planet v Huawei*, United Kingdom; *Microsoft v Motorola*, the US; and *Huawei v ZTE*, Germany, have been cited in SEP-related pronouncements. This IP protection system, which largely pertains to the telecommunication sector in China, is frequently reformed based on academic and market research and consultations. A case of infringement admitted under this system proceeds as shown in Figure 2 (Deng, Jiao and Xie 2021). Here, "JO" in Figure 2 refers to the jurisdictional objection proceeding, which is an option to be exercised by the defendant(s).

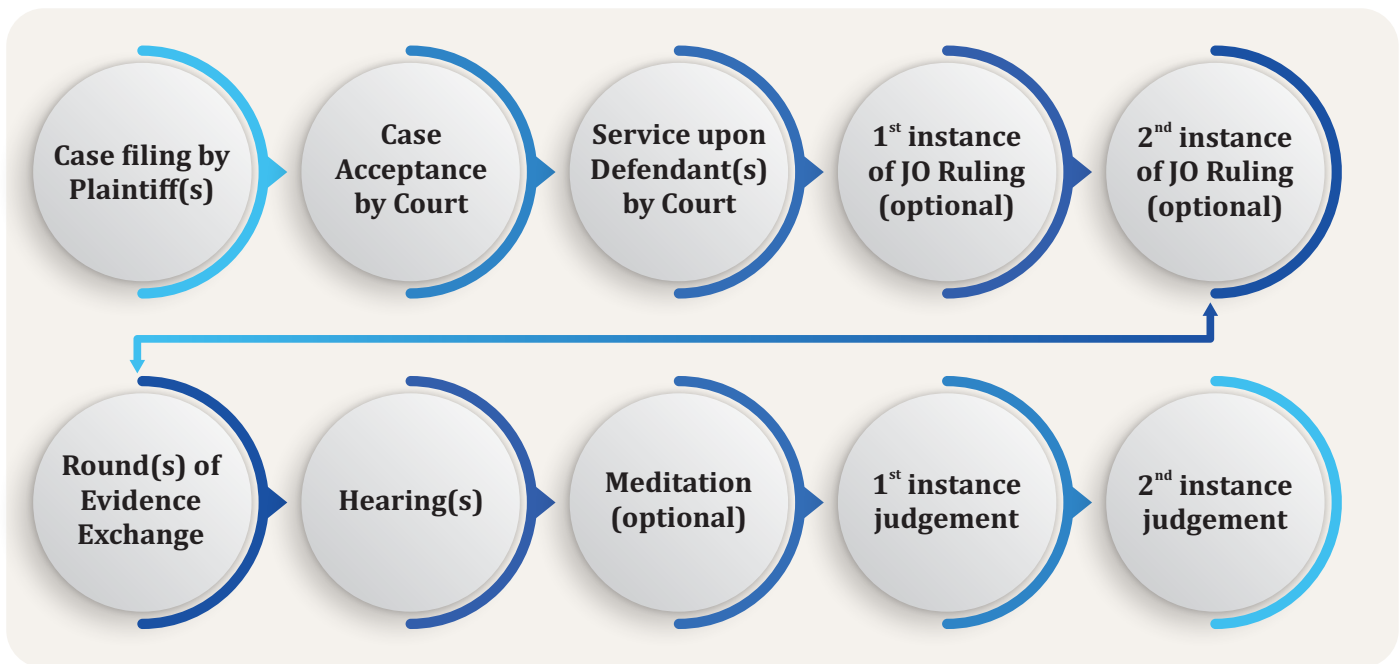


Figure 2: Life Cycle of SEP Litigation in China

The suits requesting patent invalidation have a different route. The potential licensee requests the Intellectual Property Protection Department of the China National Intellectual Property Administration (hereafter, CNIPA) to rule in favour of invalidation. CNIPA decides on the request, its decision could be challenged at the Beijing IP Court as first instance, and later at the SPC as the final instance. Primarily, there are three varieties of SEP litigation or cases in China—Patent Infringement leading to injunction or damage service to a patentee or licensee, Anti-Monopoly emerging from price hikes, bundling, differential treatment and so on. and Rate Setting leading to adjudication as per FRAND rules.

There are instances across the world where courts have acknowledged the public interest aspect associated with SEPs in restricting the smooth granting of an injunction (Osenga 2018, Riley 2014). In the first instance, the courts in China attempt to assess the scope of obvious faults during the licensing negotiation process, either by the patentee or the implementer. The obvious fault consists of deviation from general commercial practices, process, time and content. To prevent any such obvious faults, the courts provide a set of guidelines on behaviours during licensing negotiations, most of which are outcomes of general best market practices. As per the Supreme People's Court of the People's Republic of China, on the initiation of any negotiation, the patentee should provide a written notice to the implementer explaining the scope of patent and infringement acts. Upon noting any signs of willingness from the implementer, the patentee must provide claim charts, licensing fee calculation methods and reasonable terms while also indicating a turnaround time limit. Similarly, the implementer must respond to the notice from the patentee in a proactive manner. On receipt of licensing terms, an implementer must respond in substance, adding additional terms if any. When parties disagree, the courts take great care to avoid any possibility of a patent hold-up. For cases seeking injunctions based on obvious faults and FRAND rules, the logic provided in Table 1 as per the court guideline is used. based on obvious faults and FRAND rules, the logic provided in Table 1 as per the court guideline is used.

Patentee Status	Implementer Status	Injunction Status
Not FRAND	No Obvious Fault	Not Granted
FRAND	Obvious Fault	Granted
FRAND	No Obvious Fault	Not Granted
Not FRAND	Obvious Fault	Combined Evaluation

Table 1: Logic of Injunction in FRAND related adjudications

The courts have the authority to suspend the parties to return to negotiations on an agreement to work in favour of striking a negotiation. However, suspensions are a one-off thing to prevent their usage as a delaying tactic. The proceedings of the court resume as both parties decide to discontinue the negotiation process. There are certain emerging issues with SEP litigation in China, one of which is related to the authority of Chinese courts to decide SEP licensing cases outside of China. Ideally, like most nation-states, the courts in China allow judicial authority over its land only, though as per the guidelines issued for SEP litigation by SPC, a court in China may decide global licensing rate if there is no objection from the parties involved or the court understands the defence to be unreasonable (RX Corporation 2021).

SEP case Laws in China

Huawei v Samsung²⁸

The two major telecommunication entities were engaged in a negotiation over the licensing of patents related to 4G long-term evolution technology. The dispute came to the fore in 2016 as Huawei filed for violation of FRAND rules by Samsung. The court initially found Samsung to be at fault for delaying the negotiation process by not responding to the claim chart served by Huawei. However, instead of directly arriving at a judgement based on clear violation of FRAND terms by Samsung, the court not only suspended the proceeding but also organised for both the parties to re-enter the negotiation process which lasted for nearly 100 days without much progress. As the proceedings resumed, the court found that Huawei made active efforts to reach out to Samsung with a patent list, claim charts and comments. The first instance judgement by the Shenzhen Intermediate Court was never implemented due to a settlement between the parties. Nevertheless, the instance of the court in adjudicating as per FRAND rules and giving space for negotiation was displayed in the case.

Huawei v InterDigital²⁹

InterDigital filed a suit against Huawei in July 2011 in the US International Trade Commission and in the US District Court for patent infringement. Huawei filed a counter suit before the Shenzhen Intermediate People's Court pleading violation of FRAND rules and China's Anti-Monopoly Law. Huawei claimed that InterDigital had misused their dominant market position and that they were unable to arrive at a reasonable negotiation for a FRAND licence for its SEP of 3G wireless communication technology. The Shenzhen Intermediate Court found InterDigital to be at fault for seeking discriminatory and excessively high royalty rates for its

²⁸ Huawei Techs., Co. v. Samsung Elecs. Co., Case No. 3:16-cv-02787-WHO (N.D. Cal. Apr. 27, 2017)

²⁹ Interdigital Commc'ns, Inc. v. Huawei Inv. & Holding Co., 166 F. Supp. 3d 463 (S.D.N.Y. 2016)

SEPs and non-SEPs. It was also at fault for seeking an injunction in a US court of law. The court ordered InterDigital to pay 3.2 million USD to Huawei. InterDigital appealed against the judgement in a second instance but to no avail as the Guangdong HPC upheld the earlier ruling of the Shenzhen Intermediate Court, therefore deciding an international case as per the law in China.

The nature of disputes of SEPs in a global world will cross borders. Most of the major ICT companies operate from multiple locations to deliver one quality product, wherever their markets are. The emergence of nationalism in these cases involving organisations registered at different locations could hamper the entire global manufacturing ecosystem. The provision of SEPs must build a better environment for innovation and invention, and it is of the highest priority to arrive at a reasonable royalty and fee calculation method along with a flawless and transparent negotiation process.

Conclusion

A move towards larger and larger patent portfolios being leveraged by single entities and the emergence of NPEs such as Unwired Planet, when combined with the changing statuses of validity and infringement inherent in intellectual property, is bound to lead to circumstances where large patent portfolios and the aggregated risk-taking they come with become more and more commonplace. Courts, in turn, may leverage greater discretion depending on the interaction of the particularities of a case and the jurisdiction of concern. At the same time, such a move represents a blending of jurisdictions owing to the impracticality of adjudication everywhere and the resulting threat to compliance with FRAND. Like the UK Supreme Court did in 2020, other courts would find it justified to determine global FRAND terms as well. Crucially, this would also mean that courts belonging to a particular jurisdiction would, in deciding on FRAND terms that would apply globally, speak on behalf of other jurisdictions. Chinese courts could now easily become the ones setting global FRAND rates (Clark 2020). Two new issues then arise. First, it matters who the jurisdictions that speak on behalf of others are, political currents in one jurisdiction that may underpin decision making can be an imposition on other jurisdictions. Second, costs may also be borne by the jurisdictions that speak up. Chinese implementers may not value the smaller post-Brexit market in the UK, and may go to Chinese courts to set global FRAND licences.

Further, when a choice to give up sales in China or enter a global FRAND licence will be leveraged, few will be willing to give up Chinese sales. As per Huawei defendants, if Chinese patents in the case were not to be infringed or invalidated, 75 percent of the worldwide royalty would no longer hold. UK sales on the other hand, constituted only 1 percent of its royalties. For an NPE in particular, where product sales are not part of leverage, threats to seize assets (their patents) may be invoked given that stopping sales will not be an option (Clark 2020). Simultaneously, in deciding that the UK will make decisions on what are largely Chinese patents, diplomatic tensions may arise. Leaving the EU has put the UK in a weaker spot in terms of trade leverage, thus putting the British executive in a position where it has to choose between greater technology access for its people and its relationship with China on one side and its defence of the UK courts on the other side (Schindler et al. 2019). The trends of leveraging large portfolios inspiring judicial discretion and judicial overreach in speaking on behalf of other jurisdictions may threaten the compliance with FRANDS and international relations, especially in the domain of SEPs.

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