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**STANDARD ESSENTIAL PATENTS IN ICT: EXPLORING FOUNDATIONAL  
CONCEPTS AND COMPARATIVE APPROACHES FOR PREVENTING  
HOLD - UP**

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**Abstract**

*In the swiftly evolving realm of Information and Communication Technology (ICT), emerging technologies continually present novel challenges to the legal sphere. Amidst this paradigm shift, the issue of 'Standard Essential Patents' (SEPs) and their implications on the ICT sector have gained prominence. For the past two decades, ensuring 'fair, reasonable, and non-discriminatory' ('FRAND') royalties and licensing terms for SEPs have been a major concern for 'Standard Setting Organizations' ('SSOs') and the states. SEPs are patents included in a Standard by an SSO, such as in 5G, Bluetooth, and Wi-Fi technological standards. They are considered essential to that standard and thus cannot be circumvented for implementation. When any patent is included in a standard, it gives a SEP holder monopoly-like power, and its refusal to strike a deal can cause significant harm to a firm that operates within that standard. The SEP holder may take advantage of this position by demanding royalties and imposing conditions that may be greater than the patent's actual licensing value, potentially causing a Patent hold-up problem. They can compel an implementer to comply with their unreasonable demands by threatening injunctions or other recourses against patent infringement. To reduce this risk, SSOs ask the patent owners to license their patents on a FRAND basis in exchange for better licensing opportunities provided by including their patents in the standard.*

*The terms of FRAND have been subject to much litigation. The breach of FRAND terms has also been construed by antitrust/competition agencies as a ground for action under antitrust laws. Some courts have agreed that their cause of action is valid, while others prefer to see it as a breach of contract. As a result, different approaches towards the same problem have emerged. The purpose of this article is to*

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*review the concept of SEP and the approaches of various jurisdictions in terms of the extent of antitrust involvement in mitigating patent abuse and the issuance of injunctions by courts in cases of patent infringement. The Jurisdictions discussed in this review will be “The United States of America” (“US”); “European Union” (“EU”); “The Peoples Republic of China” (“PRC”); Japan; Germany; India; United Kingdom (“UK”) and Republic of Korea (“ROK”).*

**Keywords:** Standard Essential Patents (SEPs); Information and Communication Technology (ICT); FRAND; Patent hold-up; Antitrust; Competition.

## **Introduction**

Standard Essential Patents (SEPs) are pivotal in the Information and Communication Technology (ICT) sector by ensuring interoperability and standardisation across various technological platforms, such as 5G, Bluetooth, and Wi-Fi. As integral components of industry standards, SEPs facilitate seamless communication and integration of diverse technologies, driving innovation and market competitiveness. However, the management and licensing terms of SEPs raise critical issues regarding fair access, competition, and the balance between patent protection and public interest in the rapidly evolving landscape of ICT.

In general, ‘*Standard Essential Patents*’ (‘SEPs’) are those patents the implementer must licence to follow the industry standard of a practice or equipment. Standard Setting Organisations (‘SSO’) prescribe such standards. The participants of such SSO volunteer to include their patents in making a standard in return for licensing them to the relevant parties at “*fair, reasonable and non-discriminatory*” (‘FRAND’) terms and pricing. It has proven difficult for the courts to determine whether SEPs are being offered on a FRAND basis or in an exploitative manner.<sup>2</sup> Whenever a SEP holder refuses to license in line with its FRAND obligation it creates a *Patent hold-up* situation. However, interpreting pricing or other conditions as mischief to determine the presence of a Hold-up is a difficult task. It’s because it must always be justified by adequate legal support, and there is a severe lack of codification covering this aspect.<sup>3</sup> The lack of such laws may create a vulnerable environment for small firms which lack an R&D facility and rely on licenses given by the dominant parties for manufacturing and remaining relevant in the market. Hence, calls for an increased intervention of Antitrust authorities in this sector have been consistent in the last two decades. The focus has been on figuring out the validity

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<sup>2</sup> Mark A. Lemley & Carl Shapiro, ‘A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents’ (2013) 28 BERKELEY TECH. L.J. 1135 [hereinafter Lemley & Shapiro I]

<sup>3</sup> Raghavi Vishwanath ‘Demystifying the Indian FRAND Regime: The Interplay of Competition & Intellectual Property’ (2016) 21 J. of IPR 89

of patent hold-up.<sup>4</sup>

On the other side, there is a popular argument against the involvement of an antitrust regulator. The primary reason is that if an arbitrary price or terms without proper reasoning and consistency is set upon a SEP license, time and again, then it will gradually disincentivise the IPR regime. Furthermore, it may tip the scales in the infringer's favour by weakening the consequences of infringement, making them less likely to negotiate in good faith.<sup>5</sup>

This conundrum has resulted in a variety of approaches in various jurisdictions, resulting in innovative outlooks towards SEPs. The former section of the article attempts to elucidate the fundamental concepts that come together to form a SEP. The latter part of the article provides a comparative review of the approaches used by the world's leading economies to respond to the issues that come hand in glove with SEPs. In particular, their views on grant of injunctions against SEP infringement and the extent of antitrust intervention.

## Functional Concepts Behind SEP

### Patents

A patent is a category of exclusive intellectual property, '*granted for an invention, which can be a product or a process, that lays out in general, a new way of doing something or offers a technical solution to a problem*' distinct from already existing solutions.<sup>6</sup> It is territorial.<sup>7</sup> Hence, the validity of the patent is derived from the local laws of a state; ergo- its form, scope, and extent vary by state. However, as globalisation and worldwide trade grew, international collaborative efforts to create homogeneous and consistent patent systems increased. Resulting in *the Patent Cooperation Treaty*<sup>8</sup> and the W.T.O. Agreement on '*Trade-Related Aspects of Intellectual Property Rights*'<sup>9</sup> ('TRIPS'). Under them, the nation-states have agreed on minimal protection requirements for their municipal patent systems. States have enshrined statutory obligations in their local patent laws to provide consistent

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<sup>4</sup> Eliza G. Petrisci 'The Case of Unilateral Patent Ambush Under EC Competition Rules' (2013) 28 WORLD COMP. 25,26

<sup>5</sup> *Id.*

<sup>6</sup> Wipo.int., 'Patents' WIPO, <<https://www.wipo.int/patents/en/>> (last visited Aug. 20, 2024).

<sup>7</sup> *Id.*

<sup>8</sup> Formed in 1970: provides for a unified procedure and a window for filing patents and formation of an International Searching Authority (ISA).

For more info.: Wipo.int., *PCT – The International Patent System*, WIPO, <https://www.wipo.int/pct/en/> (last visited Aug. 20, 2024).

<sup>9</sup> Came into force in Jan 1995; gave minimum standards for IPR protection and a channel for dispute resolution.

For more info.: wto.org., *TRIPS — Trade-Related Aspects of Intellectual Property Rights*, WTO, [https://www.wto.org/english/tratop\\_e/trips\\_e/trips\\_e.htm](https://www.wto.org/english/tratop_e/trips_e/trips_e.htm) (last visited Aug. 20, 2024).

enforcement of patent rights and to set a consistent period for those rights to be protected.

A patent in general does not bestow an affirmative right to use an invention. Rather, it is a legal title that grants a negative right: the ability to prevent others from using or applying the invention.<sup>10</sup> It grants a patentee a right that without their permission, third parties may not use, create, sell, import, offer for sale, stock, or distribute the product (including a product produced using a patented manufacturing process).<sup>11</sup> It must have some material utility i.e., the invention must be ‘*useful*’ as per the understanding of a reasonable person related to the field of that invention.<sup>12</sup> It rewards the creative efforts of the innovator and promotes innovation by incentivising the patentee to innovate. The right is limited by time, and states have agreed to provide at least 20 years of protection under the TRIPS agreement.<sup>13</sup> However, the total duration can vary based on the invention's nature and state laws.

When a party violates the patent holder's legal rights in any way while it is still under protection, that violation is referred to as a ‘*patent infringement*’.<sup>14</sup> The patentee has the right to seek either compensatory damages or an injunction to prevent the invention from being further manufactured, used, sold, or imported in the future.<sup>15</sup> However, the patentee must show that an infringement has occurred to exercise its rights.<sup>16</sup>

The alleged infringer is allowed to pursue defences provided by the patent law.<sup>17</sup> If the infringer fails to justify its breach, the patent holder must satisfy the court that an injunction is the only appropriate remedy and that all other legal remedies would be insufficient or inadequate.<sup>18</sup> Additionally, if damages are sought, the patent holder must corroborate and justify the amount claimed as damages.<sup>19</sup>

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<sup>10</sup> Anne Layne-Farrar & Richard J. Stark, *License to All or Access to All? A Law and Economic Assessment of Standard Development Organizations' Licensing Rules*, 88 GEO. WASH. L. REV. 1307, 1311 (2020). [hereinafter Farrar & Stark]

<sup>11</sup> TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, § 28(1) Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994). [hereinafter TRIPS Agreement]

<sup>12</sup> Lizaveta Miadzvedskaya, *Encouraging Frand-ly Negotiations: A Comparison of the United States and European Approaches to Allowing Injunctive Relief in Cases Involving Frand-Encumbered Standard-Essential Patents*, 18 Wash. U. GLOBAL Stud. L. REV. 723, 727 (2019).

<sup>13</sup> TRIPS Agreement, *supra* note 11, at § 35.

<sup>14</sup> PATENT INFRINGEMENT, LII CORNELL LAW SCHOOL, [https://www.law.cornell.edu/wex/patent\\_infringement](https://www.law.cornell.edu/wex/patent_infringement), (last visited Aug. 20, 2024).

<sup>15</sup> Hovenkamp, Herbert J., "The Intellectual Property-Antitrust Interface". FACULTY SCHOLARSHIP AT PENN LAW. 1979, 2001 (2008). available at [https://scholarship.law.upenn.edu/faculty\\_scholarship/1789](https://scholarship.law.upenn.edu/faculty_scholarship/1789) (last visited Aug. 20, 2024). [hereinafter Hovenkamp I]

<sup>16</sup> Farrar & Stark, *supra* note 10, at 1312

<sup>17</sup> *Id.*

<sup>18</sup> Miadzvedskaya, *supra* note 12, at 728.

<sup>19</sup> Farrar & Stark, *supra* note 10, at 1312.

Commonly, a patent holder can profit from a patent by (i) using the rights granted by the patent; (ii) assigning the patent to another entity; (iii) *or licensing the patent to a third party*.<sup>20</sup>

### Licensing Of Patents

A license is a '*certificate or the document itself which gives permission*'.<sup>21</sup> In terms of the patent law, it is formal acceptance by a patentee under the concerned patent regulations to desist from bringing patent infringement claims against the designated patents, against a named party.<sup>22</sup> A license is prima facie proof of a patent holder's consent to not exercise its negative rights against the licensees. A patent empowers the patentee to exclude others; a license is a *voluntary* waiver of that right by the patentee in favour of the licensee. It is a method of leveraging a patent by allowing the rights holder to enter into contracts subject to certain restrictions with others, enabling them to utilise the protected invention to generate goods or services in exchange for compensation.<sup>23</sup> In some special cases, through statutory provisions such as compulsory/mandatory licensing, the state may waive the patent holder's rights on behalf of the patentee.<sup>24</sup>

The basic dimensions of the licensing agreement include the *identity of the entity* to whom the license has been granted. Additionally, it includes the *time* for which the license has been granted and the geographical limitation of the license, i.e., whether it is a global or a regional license.<sup>25</sup> Other dimensions covered under a licensing agreement include the scope of royalties, non-compete clauses and best endeavours, no-challenge clauses, restrictions on the field of use, improvements, tying and bundling, pricing, and terms & conditions, among others.<sup>26</sup>

The patent holder has a fair share of autonomy over deciding whether or not to grant a license.<sup>27</sup> However, this right is not absolute. In cases where the larger public interest is at stake, states have retained power over granting licenses outside the right-holders consent through patent law and antitrust devices.<sup>28</sup> Additionally, the patent holder can cut down the full strength of his licensing rights of their own accord by entering into contracts that impose a licensing obligation on the patent holder. For

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<sup>20</sup> DAVID BAILEY & LAURA ELIZABETH JOHN, Eds. BELLAMY & CHILD: EUROPEAN UNION LAW OF COMPETITION 774 (Oxford, 8<sup>th</sup> Ed., 2018). [Hereinafter BAILEY & JOHN].

<sup>21</sup> BLACK'S LAW DICTIONARY, 1067 (9<sup>th</sup> Ed. 2009).

<sup>22</sup> Farrar & Stark, *supra* note 10, at 1315.

<sup>23</sup> BAILEY & JOHN, *supra* note 20, at 775.

<sup>24</sup> *Id.* at 801-802.

<sup>25</sup> Farrar & Stark, *supra* note 10, at 1316.

<sup>26</sup> RICHARD LEWSI & DAVID BAILEY, COMPETITION LAW, Oxford, 8<sup>th</sup> ed., 789-791 (2018) [hereinafter LEWSI & BAILEY].

<sup>27</sup> *Id.* at 777-778.

<sup>28</sup> *Id.*

instance, patent owners who agree to licence their patents on ‘*fair, reasonable, and non-discriminatory*’ (‘FRAND’) terms in return for having their patent used in a standard.

### Meaning Of Standards

Establishing a standard is a way to ensure ‘*stability, general recognition, and conformity to established practice*’.<sup>29</sup> The definition compiled by the ‘ISO/IEC Guide 2:2004’ has been endorsed by WIPO in the context of Intellectual property rights. It confers that standard means a ‘*document, established by consensus and approved by a recognised body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.*’<sup>30</sup>

Standards, overall, ensure that products, processes, and services are of good quality and dependable. They serve as a benchmark against which objective convenience, human safety, health, and environment could be secured.<sup>31</sup> In terms of technology, standards are technical specifications that provide a uniform format for a product or a process.<sup>32</sup> They encourage *interoperability*, allowing technology to communicate in the same language and follow the same methods. They aid in understanding how a concept might be implemented, bridging the gap between invention and effective product commercialisation.<sup>33</sup>

### Benefits Of Standards

- Standards promote interoperability, which boosts network effects and increases consumer convenience.
- It ensures that all products meet a minimum standard of quality and safety.
- They promote knowledge dissemination not only in the field of that standard but also in related fields.<sup>34</sup>
- It promotes the interaction between different products and lowers switchover costs for the consumer.<sup>35</sup>
- It safeguards buyers from being left out or stranded.<sup>36</sup>

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<sup>29</sup> BLACK’S LAW DICTIONARY, 1576 (9th ed. 2009).

<sup>30</sup> WIPO, STANDING COMMITTEE ON THE LAW OF PATENTS, THIRTEENTH SESSION, *Standards and Patents* 8, SCP/13/2 ,18<sup>th</sup> Feb 2009, [https://www.wipo.int/edocs/mdocs/scp/en/scp\\_13/scp\\_13\\_2.pdf](https://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.pdf) (last visited Aug. 20, 2024). [hereinafter SCP/13].

<sup>31</sup>Id. at 9.

<sup>32</sup> Mark Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1896 (2002).

<sup>33</sup> Andre Schevciw, *The Unwilling Licensee in the Context of Standards Essential Patent Licensing Negotiations*, 47 AIPLA Q. J. 369, 375 (2019).

<sup>34</sup> Miadzvedskaya, *supra* note 12, at 725.

<sup>35</sup> Id.

- By optimising network effects it encourages creativity and innovation.
- It increases competition within an open standard.<sup>37</sup>
- Standards lead to the development of secondary markets, enabling small-scale businesses to participate in value addition or make replacement parts of products developed by bigger firms.
- The risk of the purchased equipment quickly becoming obsolete is reduced for the consumers.<sup>38</sup>
- Standardisation lowers the cost barrier to entry for newcomers and increases the incentive to invest in standardised technology.<sup>39</sup>
- Standardisation broadens the client base for standard-compliant goods and stimulates the adoption of new technologies and equipment. This results in the generation of profit sooner than would otherwise be the case in the absence of standardisation.<sup>40</sup>

### Types Of Standards

When technology or a system is extensively adopted by market participants and widely accepted by the public, it is referred to as a ‘*de facto standard*’. It becomes the leading technology on the market, even if it has not been formally certified by a recognised standard-setting authority.<sup>41</sup> For instance, the qwerty format for keyboard inputs. However, when a standard is recognised or mandated by a formal organisation governing a specific area of standards, the recommended standards are known as “*de jure standards*”, e.g. *Wi-Fi 5 or 6*.<sup>42</sup>

### Standard Development Organisations (SDO)/ Standard Setting Organisations (‘SSO’)

SDOs and SSOs are voluntary entities with the role of coordinating and facilitating the development of standards with the active involvement of different stakeholders.<sup>43</sup> They try to build a consensus among stakeholders to reach a standard, and once they do, the SSO acknowledges the agreement, making it a *de jure* standard. A popular example of a *de jure* standard is ‘*Bluetooth*’, a short-range wireless technology standard for transferring data between devices over small distances utilising radio waves ranging from 2.402 GHz to 2.48 GHz. It is managed by an SSO ‘*Bluetooth Special Interest Group*’ (‘SIG’),

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<sup>36</sup> Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 INNOVATION POL’y & ECON. 119, 138 (2000).

<sup>37</sup> *Id.*

<sup>38</sup> Philippe Chappatte, *Franchise Commitments - The Case for Antitrust Intervention*, 5 EUR. COMPETITION J. 319, 323 (2009).

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> SCP/13, *supra* note 30, at 10.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

comprising over 35,000 member companies in telecommunication and related fields.<sup>44</sup> Similar to SIG there are more than 1120 organisations across different fields of industry overseeing standards.<sup>45</sup> SSOs, as per geographical parameters, can be of two types: *International* and *Regional*. ‘*The International Organization for Standardization*’ (ISO), is an example of an international SSO responsible for developing and coordinating international standards with global impact and having representatives from different SSOs and governments. SSOs can also be *regional*, such as the ‘European Telecommunications Standards Institute’ (ETSI) and ‘The African Organization for Standardization’ (ARSO), establishing standards for use in a specific location. A typical SSO's membership might be made up entirely of universities, commercial enterprises, distributors, governmental entities, or a combination of all.<sup>46</sup> In the late 1800s, many of the first industry-wide SSOs were formed, some of which are still in service today to standardize industry advancements.<sup>47</sup>

SSOs have debated whether or not to include patented inventions in the creation of standards for the past 70 years.<sup>48</sup> During the initial years of the debate, there was general disapproval towards it due to the concerns that including a patent into a standard would promote ‘*monopolistic tendencies*’.<sup>49</sup> However, because of the utilitarian benefits and unavailability (discussed in the next heading) of embedding a patent into a standard and the emergence of legal devices that could be used to mitigate monopolistic tendencies, the amalgamation of privately owned patents into standards was universally accepted giving rise to *Standard Essential Patents*.<sup>50</sup>

### Standard Essential Patent (“SEP”)

A SEP is a patent included in a de-jure standard by an SSO.<sup>51</sup> It necessitates the acquisition of a license by any *implementor* who wants to utilise the standard.<sup>52</sup> In the matter of *In Re Innovatio*, the District Court for the North District Of Illinois East (US) observed that a patent becomes essential to a standard because no other ‘commercially and technically feasible non-infringing alternative’ exists.<sup>53</sup> Hence,

<sup>44</sup> *about us*, Bluetooth Special Interest Group, <https://www.bluetooth.com/about-us/> (last visited Aug. 20, 2024).

<sup>45</sup> Standards Setting Organizations List, Consortium.info SSO List - ConsortiumInfo.orgConsortiumInfo.org (last visited Aug. 20, 2024).

<sup>46</sup> Robert D. Keeler, *Why Can't We Be (F)rand: The Effect of Reasonable and Non-Discriminatory Commitments on Standard-Essential Patent Licensing*, 32 CARDOZO ARTS & ENT. L.J. 317, 321 (2013).

<sup>47</sup> *Id.*

<sup>48</sup> Jorge Contreras, *A Brief History Of FRAND: Analysing Current Debates In Standard Setting And Antitrust Through A Historical Lens*, 80 ANTITRUST L. J. 39, 43 (2015). [Contreras II]

<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at 41.

<sup>51</sup> Standard Essential Patents, EUROPEAN COMMISSION, [https://ec.europa.eu/growth/industry/policy/intellectual-property/patents/standards\\_en](https://ec.europa.eu/growth/industry/policy/intellectual-property/patents/standards_en) (last visited Aug. 20, 2024).

<sup>52</sup> Anita Alanko, *The New Madison Approach to Antitrust Law and Intellectual Property Law*, 28 CATH. U. J. L. & TECH 219, 227-220 (2020).

<sup>53</sup> *In re Innovation IP Ventures, LLC Patent Litig.*, 956 F. Supp. 2d N.D.Ill 925, 933. (2013)



when claims are read on any element of a standard in such a way that using the standard without infringing is impossible, the patent becomes ‘*essential*’ for a standard.<sup>54</sup> For instance, patents are needed to develop devices that follow a technology standard of 5G cellular networks.

SEP is an agglomeration of the concepts discussed above. It is a mix of extremes. It is an intellectual property protected by exclusivity and negative rights and also a standard open to all, which must be made fairly available to everyone who applies to license it.

### ***The Emergence of SEPs***

SEPs have gained a central position in technology-related policy discussions due to rapid advances in *information and communication technology (ICT)* over the last three decades. The ICT revolution is visible in patent filings, as from 1986 to 2016, the number of patents filed in OECD countries tripled, with IT-related technologies accounting for the majority of the increase.<sup>55</sup> Advances in semiconductor technology have paved the way for the information revolution, which has resulted in astronomical profits for the ICT industry. Increased investments and consumer demands have led to increased competition, taking the form of patent races and resulting in bigger and faster innovation. The rate of technological advancements and creative destruction has been very high.

There has been an unprecedented rate of induction of new technologies and the creation of new standards (e.g., USB, WIFI, 2G-6G, etc.). The time intervals for the revision of standards have also decreased. Furthermore, with the increasing sophistication of the technologies used, it has gotten harder and harder for SSOs to create standards without using privately owned patents. Creating a practical and up-to-date technological standard without impacting on other's patent rights has become difficult.<sup>56</sup> This is the primary reason the SEP jurisprudence is attracting more academic and industry interest now than at any other time in the history of patents and standards.

Various concerns surround SEPs, such as, when a standard is protected by patents, it might result in the rise in costs of implementing that standard. However, SSOs ensure that a patent is only incorporated in a standard when it determines that the enhanced performance or cost reductions in other inputs outweigh the expected royalty costs.<sup>57</sup> Similarly, the SSOs and other stakeholders have devised various mechanisms to mitigate the competition and market risks that arise from including a patent in a

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<sup>54</sup> Farrar & Stark, *supra* note 10, at 1321.

<sup>55</sup> Patents by technology, OECD.STATS, [https://stats.oecd.org/Index.aspx?DataSetCode=PATS\\_IPC#](https://stats.oecd.org/Index.aspx?DataSetCode=PATS_IPC#) (last visited Aug. 20, 2024).

<sup>56</sup> Keeler, *supra* note 46, at 46

<sup>57</sup> Michael A. Lindsay, *Antitrust and Intellectual Property in a Neo-Populist Age*, 32 ANTITRUST 7, 8 (2018).

standard. Particularly, there is concern that it should not harbour monopoly by firms with the power to license such patents.

To minimise the influence of such concerns, both SSOs and the state have experimented with various instruments available in contract, antitrust, and patent laws. SSOs have committed to adopting special policies on intellectual property rights to allow SEP owners to receive reasonable royalties in exchange for licensing their patents. While also restricting them from collecting excessive royalties after the rest of the industry has agreed to the standard. In pursuance of this purpose, SSOs require SEP owners to enter into a contract with the SSO before accepting their patent in any standard. Under such a contract, they agree to license their SEPs to the third-party implementers on ‘*Fair, Reasonable and Non-discriminatory*’ (‘FRAND’) terms.<sup>58</sup>

## FRAND

Most international and regional SSOs, to mitigate widely identified concerns with standards, have implemented IPR rules requiring IPR holders to disclose all patents essential to a standard. Under this, they must also commit to ‘fair, reasonable and non-discriminatory’ FRAND (or RAND) terms for licensing their SEPs.<sup>59</sup> Here, ‘*fair and reasonable*’ alludes to the amount that implementers must pay to license the SEP, which is usually paid in the form of a royalty.<sup>60</sup> The phrase ‘*non-discriminatory*’ refers to a SEP owner's commitment to licence the patent included in the standard to all implementers and potential implementers at rates and conditions equivalent to those given to other implementers.<sup>61</sup>

SSOs obtain a commitment from essential patent owners that they would moderate the royalty claims and operate in a reasonable and non-discriminatory way. They do so by requiring firms to give FRAND pledges before the other industry participants are locked in on a standard.

Most discussions among SEP owners and implementers happen after the implementers have already infringed on the technology protected by the SEPs. FRAND regulations thus become extremely valuable because the implementor has already invested in the technology and has incurred sunk costs (capital spent in researching and designing that technology), putting them on the weaker side of the bargaining table.<sup>62</sup> FRAND provides the SSO participants, manufacturers, and other related firms operating in the area a sense of security that the rights owners will not impose unfair and unreasonable conditions or

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<sup>58</sup> A. Douglas Melamed & Carl Shapiro, *How Antitrust Law Can Make FRAND Commitments More Effective*, 127 YALE L. J. 2110, 2113 (2018). [hereinafter Melamed & Shapiro].

<sup>59</sup> Chappatte, *supra* note 38, at 326.

<sup>60</sup> Erik Hovenkamp, *Tying, Exclusivity, and Standard-Essential Patents*, 19 COLUM. SCI. & TECH. L. REV. 31-35 (2017). [hereinafter Erik Hovenkamp]

<sup>61</sup> *Id.*

<sup>62</sup> Melamed & Shapiro, *supra* note 58, at 2113.

discriminate against them after establishing a standard. It also gives them legal options if they face a SEP holder trying to leverage extra payments in return for a license.

The FRAND commitments are interpreted largely in line with the jurisdiction's laws where the SSO is registered. Thereby, the scope of the rights of third parties is justified through different legal logic depending upon the legal framework of that jurisdiction.<sup>63</sup> For instance, courts in the US have recognised implementors as third-party beneficiaries, giving them access to the license at fair conditions and pricing.<sup>64</sup>

FRAND encumbered patents are treated differently than traditional patents, as in most cases, an essential patent owner *willingly* provides or permits the inclusion of its invention in a standard. It does so with the understanding that if the technology is included in the standard, the patent owner will license it on the SSO's terms to anyone willing to pay the fair price.<sup>65</sup> In contrast, a normal patent owner has the authority to reject any buyer a license. This puts a FRAND encumbered patent in a special position. When a patent becomes standard, the owner of the patent relinquishes part of its patent autonomy in exchange for better market access for licensing that patent. In essence, a FRAND promise is an agreement not to exploit the entire scope of an owner's rights in return for the adoption of its technology as an accepted standard that provides the owner with additional licensing prospects.<sup>66</sup>

The following section presents a comparative assessment of the approaches of antitrust bodies, courts, and other relevant stakeholders towards assessing the patent hold-up problem by SEP holders. It gauges the extent of the role of antitrust, competition, or anti-monopoly laws in addressing it. It includes the seven largest global economies selected based on their Gross Domestic Product (“GDP”), as calculated by the International Monetary Fund (“IMF”) for the year 2023,<sup>67</sup> namely: “*The United States of America*” (“US”); “*European Union*” (“EU”); “*The Peoples Republic of China*” (“PRC”); *Japan*; *Germany*; *India*; *United Kingdom* (“UK”); [in a shuffled order] and with an added mention of the *Republic of Korea* (“ROK”) *because of its significant relevance in the SEP ecosystem*.

### **United States of America (“US”)**

In the U.S the ‘Department of Justice (DOJ)’ and the ‘Federal Trade Commission’ (‘FTC’) have taken inconsistent approaches on SEPs over time. These approaches have majorly reflected the greater agendas of the respective leadership in power. During the Obama administration, the F.T.C. and the

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<sup>63</sup> Schevciw, *supra* note 33, at 380.

<sup>64</sup> *In re Innovatio*, *supra* note 53, at 933.

<sup>65</sup> Chappatte, *supra* note 38, at 327.

<sup>66</sup> Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135, 1140 (2013). [hereinafter Lemley & Shapiro]

<sup>67</sup> IMF DATA-MAPPER, GDP CURRENT PRICES,

<https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD> (last visited Aug. 20, 2024).

DOJ were largely in agreement that antitrust can and must be used to resolve issues related to patent hold-up in standard-setting situations.<sup>68</sup> However, this changed in 2018 when *Makan Delrahim*, Assistant Attorney General of the Antitrust Division at the DOJ, announced a pro-IP ‘The new Madison approach’ during the Republican administration under Trump's tenure. Under the licensing of SEPs, he called for strong IP rights to support both SEP holders and implementers, reducing the scope for antitrust to oversee SEPs.<sup>69</sup> A shift is underway once again, with the Biden administration seen as receptive to antitrust complaints, intending to make SEPs further accessible.<sup>70</sup>

### ***The aversion of Courts towards Antitrust involvement***

The US courts and the antitrust watchdog FTC have had differences over the jurisdiction of FTC over SEP contracts covered by FRAND. In 2007, to make a case against a hold-up activity, FTC had taken cognisance of FRAND violations by invoking the Sherman<sup>71</sup> and FTC<sup>72</sup> Acts. In its order of *Rambus, Inc.*<sup>73</sup> the FTC had concluded that deceit to standard-setting bodies is a contravention of sec. 2 of the ‘Sherman Act,’<sup>74</sup> a provision that broadly disallows any unwarranted monopoly. However, the D.C. Circuit Court of Appeals (‘DC Circuit Court’) overturned Rambus's ruling as it believed that the FTC had failed to show any harm to competition.<sup>75</sup> The DC Court had asserted that “*deceptive conduct any other kind must have an anticompetitive effect to form the basis of a monopolization claim.*”<sup>76</sup>

However, interestingly just a year back in 2007, the ‘Third Circuit Court’ in the case of *Broadcom vs Qualcomm*<sup>77</sup> had found Qualcomm guilty of breaching sec. 2 of the ‘Sherman Act’. The Court held so for Qualcomm's deliberate misleading commitment that it shall license its ‘Wideband Code Division Multiple Access’ (‘WCDMA’) technology on a FRAND basis. Relying on this commitment, the SSOs

<sup>68</sup>Koren W. Wong-Ervin, *The Proper Role of Antitrust in Addressing Patent Hold-Up*, 11 ANTITRUST L. ABA 11, (2014).

<sup>69</sup> Makan Delrahim, Assistant Attorney Gen., Antitrust Div. Of U.S. Dep't Of Justice, The "New Madison" Approach To Antitrust And Intellectual Property Law, Address Before The University Of Pennsylvania Law School <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-university> (last visited Aug. 20, 2024).

<sup>70</sup>Matthew Bultman, *Biden Signals Shift Toward Tech on Standard Essential Patents*, BLOOMBERG LAW <https://news.bloomberglaw.com/ip-law/biden-signals-shift-toward-tech-on-standard-essential-patents> (last visited Aug. 20, 2024).

<sup>71</sup> Sherman Antitrust Act, 15 U.S.C. §§ 1-38 (1890).

<sup>72</sup> U.S. Code Title ,15. Commerce and Trade, Ch. 2. Federal Trade Commission; promotion of export trade and prevention of unfair methods of competition subchapter i. Federal trade commission, 15 U.S.C. §§ 41-58 (1914)

<sup>73</sup> In re Rambus, Inc., F.T.C 2007 WL 431522, at 68 (2007).

<sup>74</sup> “Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.” Sherman, *supra* note 162, at § 2.

<sup>75</sup> Rambus, Inc. v. F.T.C., D.C. Cir 522 F.3d 456 (2008).

<sup>76</sup> *Id.*

<sup>77</sup> *Broadcom vs Qualcomm*, 501 F.3d 297, 323 (2007).

included WCDMA in the ‘Universal Mobile Telecommunications System’ (UMTS standard’). Later, Qualcomm retracted the commitment and refused to commit to the FRAND terms.<sup>78</sup> Hence, for its ‘market dominance, ability to extract supra-competitive prices, and presence of an entry barrier,’<sup>79</sup> the Third Circuit Court concluded that Qualcomm had monopolistic power, therefore, ruling in favor of the SSO and the implementor.

Additionally, In 2013, In its order of *In re Motorola Mobility LLC and Google Inc*<sup>80</sup>, the FTC observed that an opportune FRAND violation upon the ratification of a standard is cognisable under Sec. 5 of the FTC Act, which has a broader purview than Sherman Act and empowers to take action against ‘unfair or deceptive acts or practices in or affecting commerce’.<sup>81</sup> In the instant case, Google was fined by the FTC for threatening injunctions against voluntary licensees to force them to accept supra-license terms. The law regarding the scope of antitrust's role in the context of SEPs is still in flux despite more than a decade-long of engagements. In 2020, FTC, in response to the appeal of *FTC v. Qualcomm*, argued that Qualcomm's denial to license its owned SEPs to its chip-making rivals is an antitrust violation. In the original suit, the District Court had decided in favour of the arguments of FTC, but at the appeal, the ‘Ninth Circuit Court of Appeals’ disagreed. It stated that such a violation could be viewed as a breach of contract. Still, the FTC has not demonstrated conclusively that Qualcomm's alleged breach of its obligations to license its SEPs on FRAND terms also constitutes an antitrust violation.<sup>82</sup> *Prof. Hovenkamp* criticised the Ninth Circuit bench's decision to reverse the District Court's decision for ‘not indicate[ing] any awareness’<sup>83</sup> of the possibility for antitrust to identify the competition concerns of Qualcomm's ‘no license, no chips’ policy.

### ***On Injunctions***

Despite showing restraint on granting jurisdiction to FTC, the US courts have been quick to acknowledge that the grant of injunctions on request of SEP holders may conflict with the FRAND requirements to which they have previously consented. Such understanding emanated from the landmark case of *eBay Inc. v. MercExchange, L.L.C.*<sup>84</sup> which was related to the grant of injunction in cases of IP violations. The Apex court had placed constraints on the automatic issuance of injunctions against patent infringements. It was a significant departure from the previous position in the U.S, where,

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<sup>78</sup> *Id.* at 305.

<sup>79</sup> *Id.* at 315.

<sup>80</sup> Matter of Motorola Mobility LLC, and Google, Inc., 156 F.T.C. 147 2013 WL 12180882, \*8-9 (2013).

<sup>81</sup> *Id.*

<sup>82</sup> *FTC v. Qualcomm Inc.*, 9th Cir. 969 F.3d 974 (2020).

<sup>83</sup> Herbert Hovenkamp, *FRAND and Antitrust*, 105 CORNELL L. REV. 1683, 1692 (2020). [hereinafter Hovenkamp II]

<sup>84</sup> *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. (2006).

based on the broad assumption of irreparable harm, grant of a permanent injunctive relief was almost certain upon a court's finding of infringement. It laid down a four-factor test in which:

*‘a plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, 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’*<sup>85</sup>

By this shift from grant of injunction as a rule of thumb to discretionary power, courts gained the ability to check hold-up tendencies if a SEP owner demonstrated them while remaining well within the ambit of patent law. In *Apple vs Motorola*, the Federal Circuit Court extended the credence of the *eBay test* to SEPs. It concluded that irreversible damage cannot be perceived when an implementor is willing to sign a FRAND contract in good faith. It thereby excludes the possibility of the grant of injunctive relief against someone who is a ‘willing licensee.’<sup>86</sup> The court however in an effect to strike a balance rejected the idea that a FRAND-bound SEP owner loses their right to seek injunctive relief simply because they agreed to FRAND commitments.<sup>87</sup> Leaving a window open for the SEP holder to request injunctive relief from the court against an implementer who acts in bad faith.

The United States has taken a constructive approach to injunctions. It has recognised the adverse relationship of injunctions with the FRAND commitments of SEP holders. Additionally, it has incorporated deterrence against hold-up tendencies by reducing the possibility of patent law being used to engage in patent hold-up. However, the recent Ninth Circuit Court’s decision has upped the ante for antitrust to step in, and experts claim it has made it difficult for it to intervene even when competitive harm is apparent.<sup>88</sup> The intersection of SEP and antitrust is dynamic in the United States. After the recent adverse antitrust judgments, policymakers need to step in to clarify the applicability of antitrust in the SEP framework explicitly.

## **European Union (“EU”)**

Compared to the United States, which is more pro-IP but opposed to antitrust, as discussed, the European Union has taken a more moderate stance. Apart from the national competition watchdogs of its constituent nations, competition laws can be enforced by the ‘European Court of Justice’ (‘CJEU’) and the ‘European Commission’ (‘EC’) under art. 101<sup>89</sup> and art. 102<sup>90</sup> of the “Treaty on the Functioning

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<sup>85</sup> *Id.* at 388-390.

<sup>86</sup> *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286, (Fed. Cir. 2014).

<sup>87</sup> *Id.*

<sup>88</sup> *Hovenkamp II*, supra note 82, at 1692.

<sup>89</sup> Treaty on the Functioning of the European Union, Art 101, 25 March 1957, EU.

<sup>90</sup> *Id.* at § 102.

of the European Union” (‘T.F.E.U.’). These articles prohibit the formation of cartels, disrupting free competition, and abusing market dominance. National courts have a better opportunity to decide on FRAND-related issues because patent laws and antitrust are products of national law. Recognizing this, the CJEU has mostly played its part by responding to the larger FRAND policy-based questions raised by the national courts.

### ***Huawei v. ZTE***

One such instance is the landmark case *Huawei v. ZTE*<sup>91</sup>, where the Dusseldorf District Court in Germany asked the CJEU to resolve an issue involving SEPs. It had questioned whether a SEP holder would be abusing its dominant position by filing a lawsuit for an injunction against a violator who had already expressed a desire to negotiate an offer sent by the SEP holder. The CJEU decided that pursuing an injunction doesn't necessarily imply that a SEP owner is abusing its market position under art. 102 of the TFEU.<sup>92</sup> However, CJEU also noted that there are legitimate expectations on the part of the implementors that the SEP owner will give licenses on FRAND conditions. Therefore, an outright refusal to license by an SEP holder might be considered abuse under Article 102 of TFEU.<sup>93</sup> In this decision, the CJEU established a ‘*negotiation protocol*’ that applies to the SEP holder and the implementer equally, laying the groundwork for courts to check whether an art. 102 breach exists. To avoid competition scrutiny, the protocol stipulates that 1) the SEP holder must submit a notice detailing the infringement to the implementor and consequently send out customised FRAND proposals; & 2) Implementers must respond promptly and send counter offers that are consistent with the industry practice.<sup>94</sup>

This protocol serves as a benchmark for the courts in EU member states to assess the possibility of a SEP holder engaging in a hold-up and the merits of its injunction request. The ‘*Huawei v. ZTE*’ case effectively ended the possibility of a grant of automatic injunctions in EU member states in the cases involving FRAND-encumbered SEPs, much like the *eBay*<sup>95</sup> decision did in the US. The European Commission published a communication on the European Union’s Approach towards SEPs in November 2017. It went into greater detail about SEP holders’ and implementers obligations as a result of the *Huawei* decision. It stated that the notice sent by the SEP holder upon infringement of the Patent

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<sup>91</sup> Huawei Techs., Co. v. ZTE Corp., Case C-170/13 2015 E.C.R. 4 at 7 (ECJ).

<sup>92</sup> *Id.* at 71.

<sup>93</sup> *Id.* at 54.

<sup>94</sup> *Id.* at 77.

<sup>95</sup> *Ebay*, *supra* note 87, at 175.

should be ‘*sufficiently detailed*’ and have all the important details regarding the infringement.<sup>96</sup> The counteroffer in response by the implementer should be ‘*concrete and specific*.’<sup>97</sup>

Further in 2018, the European Commission appointed a ‘*Group of Experts on licensing and valuation of SEPs*’ which submitted its report in 2021. The report was criticised for failing to reach a consensus on several issues where the EC had requested guidance.<sup>98</sup> The report's major recommendation was that the royalties should be levied on component level manufacturers rather than final product manufacturers so that suppliers would not have to absorb the costs from their profit margins.<sup>99</sup> In April, 2023 a proposal has been tabled for discussion at the European parliament for greater regulation of SEPs including measures like establishing a central registry at the EUIPO (EU Intellectual Property Office) to store information on SEPs, including ownership, licensing terms, and essentiality.<sup>100</sup> Similar to the reaction to the report, this proposal has also received opposition due to its advocacy for increasing bureaucratic interventions in the process.<sup>101</sup> The report does not represent the opinions of the EC and the proposal is still under discussion. Still, the backlash against it does provide some glimpse into the difficulties that the EU will encounter when trying to reach an understanding with various stakeholders regarding their SEP policies.

### United Kingdom (“UK”)

The contribution of the U.K in extending the jurisprudence given by the EU on SEPs has been noteworthy. The *CJEU*'s judgment in *Huawei v. ZTE* maintained FRAND-compliant actions beyond Article 102's reach but also left open the question of when FRAND violations might directly result in Article 102 violations.<sup>102</sup> The ‘*UK High Court of Justice*’ in the case of *Unwired vs. Huawei*<sup>103</sup> went into detail on these issues. The English High Court determined that the FRAND and competition law parameters differ. Even if the rate is greater than the FRAND rate, it may still not violate competition law.<sup>104</sup> The court also meant that the SEP owners can agree to different FRAND licensing fees with

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<sup>96</sup> The European Commission, Communication From The Commission To The European Parliament, The Council And The European Economic And Social Committee: Setting Out The Eu Approach To Standard Essential Patents 9 (2017).

<sup>97</sup> *Id.* at 10.

<sup>98</sup> Rory O'Neill, *EU expert group criticised over SEP proposals*, WORLDIPPREVIEW <https://www.worldipreview.com/news/eu-expert-group-criticised-over-sep-proposals-21037> (last visited Aug. 20, 2024).

<sup>99</sup> E03600, *supra* note 32, at 12.

<sup>100</sup> Briefing, EU Legislation in Progress, *Standard essential patents regulation*, EPRS, pg. 4 [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754578/EPRS\\_BRI\(2023\)754578\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754578/EPRS_BRI(2023)754578_EN.pdf) (last visited Aug. 20, 2024).

<sup>101</sup> Gene Quinn, *Europe's Schizophrenia on Standard Essential Patents*, IPWATCHDOG <https://ipwatchdog.com/2023/04/23/europes-schizophrenia-standard-essential-patents/id=159856/> (last visited Aug. 20, 2024).

<sup>102</sup> LEWSI & BAILEY, *supra* note 25, at 823-825.

<sup>103</sup> *Unwired v. Huawei*, (2017) 711 EWHC (Pat) (U.K.).

<sup>104</sup> *Id.* at 153.



different licenses as long as they're all within a FRAND range. The Court determined that the non-discrimination aspect of FRAND is not a sharply defined element that must be understood to support an implementer requesting a lower-than-FRAND rate just because an equally qualified licensee has received a lower rate, not until and unless that lower rate is provided for intentionally distorting competition among different implementors.<sup>105</sup>

The High Court's most notable observation was that when a court sets a FRAND rate, only license terms and royalty rates will be considered as FRAND. It hence eliminates the subjective nature of FRAND rates, once a court sets it.<sup>106</sup> The court recognised three ways of setting the rates. The first way is to establish a benchmark rate based on the worth of the patentee's portfolio. The second way is by, judging from *comparable licenses (bottom-up)*, and the third, is by taking a *top-down approach*.<sup>107</sup>

In an appeal against the above-discussed decision, the Supreme Court recognised the jurisdiction of courts of the U.K. over determining the terms of a worldwide license for standard-essential patents, including royalty rates.<sup>108</sup> In this decision, where the top court dismissed three clubbed appeals, it upheld the observations of the High Court.<sup>109</sup> Furthermore, it observed that because the SSO's rules supported the idea that a FRAND license would cover the whole worldwide portfolio, including the UK and non-UK patents, the Court had the jurisdiction to rule on the worldwide FRAND terms. It thus rejected Huawei's contention that courts in the People's Republic of China ('PRC') were a better forum for deciding the terms<sup>110</sup>. The Court agreed with the observation of the High court that a country-wise license was not in the FRAND spirit and only an '*only a global license or at least a multi-territorial license would be FRAND*'<sup>111</sup>

The English approach has successfully delineated FRAND and the competition laws. If the SEP owner and an implementer are unable to reach an agreement on FRAND license conditions, the English courts have indicated that they are prepared to step in to help. With a clear position on the roles of competition law and FRAND, they may be able to shape a long-lasting framework for future SEP disputes.

### **Peoples's Republic of China ("PRC")**

In comparison to the jurisdictions discussed above, the PRC has been quite liberal in its application of anti-monopoly laws (AML') and grant of injunctions against SEP owners. Since it is the largest market and producer of ICT products in the world, the PRC has been a scene of SEP-related court cases and has

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<sup>105</sup> *Id.* at 806-807.

<sup>106</sup> *Id.* at 164.

<sup>107</sup> *Id.* at 480, 597, 772, and 806.

<sup>108</sup> *Unwired Planet International Ltd & Anor v Huawei Technologies (UK) Co Ltd & Anor* [2020] UKSC 37. (UK)

<sup>109</sup> *Id.* at 170-171.

<sup>110</sup> *Id.* at 84-90.

<sup>111</sup> *Id.* at 168.

tended to support licenses in most cases.<sup>112</sup> The *Anti-Monopoly Law* ('AML') enacted by it in 2008 prohibits vertical and horizontal monopoly agreements, collusion, and abuse of market dominance broadly. It gives powers to the *Ministry of Commerce* (MOFCOM'), the '*National Development and Reform Commission*' ('NDRC'), and the '*State Administration for Industry and Commerce*' ('SAIC') to take cognizance of such violations.<sup>113</sup>

The first noteworthy case of SEP disputes in PRC was *Huawei v. Intradigital*<sup>114</sup>. In 2011 and 2012, IDC filed suit against Huawei, among other companies, for patent infringement on SEPs in the US. As a retaliatory measure, Huawei filed a suit under AML alleging a hold-up in the *Shenzhen Intermediate People's Court* in PRC. By unpacking the Interdigital–Apple license, The FRAND rate was judged to be 0.019 per cent of the final price of the device by the Shenzhen Court. Furthermore, it found InterDigital to have violated FRAND by offering out-of-FRAND proposals to Huawei, seeking free cross-licensing from Huawei of some of its patents, and bundling non-SEPs with SEPs in the licensing of the portfolio.<sup>115</sup> The court found that IDC had violated the AML by pursuing injunctive relief against Huawei in the United States when the parties were still negotiating the license conditions and awarded Huawei 20 million renminbi in damages.<sup>116</sup> Based on this ruling, SEP holders and licensees had been bringing simultaneous anti-monopoly and FRAND complaints before PRC's courts, anticipating AML violations to flow from the breaches of FRAND commitments.<sup>117</sup>

However, Courts in PRC have not been consistent in their approaches. In another case of *Samsung vs. Huawei* when this time Huawei was the SEP owner seeking an injunction and Samsung, a South Korean company alleging holdup, the Shenzhen court refused to use the same methods to evaluate royalty. It rejected Samsung's request to let them pay the same percentage of royalty that the court had set for Huawei in *Huawei vs. IntraDigital*.<sup>118</sup> The court also granted Samsung an injunction against using those SEPs while asking them to continue negotiating with Huawei.<sup>119</sup>

Also, after *Huawei v. Samsung*, the '*Guangdong Higher People's Court*' a court higher up than Shenzhen's court, published the '*Guangdong Court Guidelines for Judicial Review of Cases Concerning*

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<sup>112</sup> Claire Guo, *Intersection of Antitrust Laws with Evolving Frand Terms in Standard Essential Patent Disputes*, 18 J. Marshall REV. INTELL. PROP. L. [i] 260, 269 (2019).

<sup>113</sup> Jie Gao, *Development of the FRAND Jurisprudence in China*, 21 COLUM. Sci. & TECH. L. REV. 446, 453 (2020).

<sup>114</sup> CPI, *Huawei v. InterDigital: China at the Crossroads of Antitrust and Intellectual Property, Competition and Innovation*, COMPETITION POLICY INTERNATIONAL <https://www.competitionpolicyinternational.com/huawei-v-interdigital-china-at-the-crossroads-of-antitrust-and-intellectual-property-competition-and-innovation/> (last visited Aug. 20, 2024).

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

<sup>117</sup> Guo, *supra* note 109, at 271.

<sup>118</sup> Adrian Emch, *Huawei v. Samsung – A new benchmark for standard essential patent litigation in China?*, KLUWER COMPETITION LAW BLOG <http://competitionlawblog.kluwercompetitionlaw.com/2018/06/14/huawei-v-samsung-new-benchmark-standard-essential-patent-litigation-china/> (last visited Aug. 20, 2024).

<sup>119</sup> *Id.*

*Disputes on Standard Essential Patents*’ (Guangdong Court Guidelines’) in 2018. It separated the FRAND and AML enforcements, inferring that FRAND infractions will not always lead to AML violations.<sup>120</sup>

With Chinese companies controlling a large percentage of total SEPs in emerging technologies, for instance: ZTE and Huawei cumulatively controlling more than 20% of SEPs in the 5G standard<sup>121</sup>; It might be expected the PRC courts change from being pro-licensee towards a more neutral stance akin to the E.U.

Since 2013, the ‘Competition Commission of India’ (‘CCI’) and the ‘Delhi High Court’ have been the intersection points of several SEP disputes. The CCI is India's competition monitor, drawing its powers from the Competition Act, 2002. It is tasked with ensuring the prohibition of anti-competitive agreements under sec. 3 of the Act<sup>122</sup> and preventing abuse of dominance under sec 4.<sup>123</sup> The majority of SEP-related disputes in India, an emerging economy and a major ICT market, involve a slew of telecommunication start-ups that have sprung up in the last decade, alleging abuse of dominance against SEP holders in ICT-related standards.

In 2013 the CCI has taken cognisance of issues brought before it by *Micromax*<sup>124</sup> and *Intex*<sup>125</sup> (India-based ICT start-ups involved in manufacturing low and mid-range smartphones)<sup>126</sup> alleging abuse of dominance by *Ericsson*, a major SEP holder in 3G and 4G standards. In the case of *Micromax vs. Ericsson*, Micromax accused Ericsson of abusing its monopolistic position by demanding excessive royalties for using its SEPs required to implement 2G and 3G wireless telecommunication standards for which no alternative technologies exist.<sup>127</sup> Micromax also asserted that using the retail price of a downstream product as the base for royalty is a misuse of SEPs that would harm consumers, as they will have to shell out more money for the end product.<sup>128</sup> CCI found merits in the issues raised and ordered a further inquiry by the ‘Director-General’ (‘DG’). The CCI observed that Ericsson enjoyed a dominant position in the relevant market, and the royalties proposed by it had no relationship with the end product

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<sup>120</sup>King & Wood Mallesons, ‘Guangdong High People’s Court Issued a Guideline for Trial of SEP Disputes’, *CHINA LAW INSIGHT* <https://www.chinalawinsight.com/2018/05/articles/intellectual-property/guangdong-high-peoples-court-issued-a-guideline-for-trial-of-sep-disputes/> (last visited Aug. 20, 2024).

<sup>121</sup> Katharina Buchholz, ‘Who Is Leading the 5G Patent Race?’, *STATISTA* <https://www.statista.com/chart/20095/companies-with-most-5g-patent-families-and-patent-families-applications/> (last visited Aug. 20, 2024).

<sup>122</sup> The Competition Act, 2002; § 3, No. 12 Act of Parliament of India, 2003 (India).

<sup>123</sup> *Id.* at § 4.

<sup>124</sup> *In re Micromax informatics ltd v Telefonaktiebolaget lm Ericsson*, case no.50 of 2013, CCI (India) [hereinafter *Micromax v. Ericsson*].

<sup>125</sup> *In re Intex techs. (India) ltd v Telefonaktiebolaget lm Ericsson*, (2014) case no. 76 of 2013, CCI 6 (India).

<sup>126</sup> Writankar Mukherjee, ‘Domestic mobile phone makers’ revenues hit by Chinese companies’, *ET TELECOM.COM* <https://economictimes.indiatimes.com/tech/hardware/domestic-mobile-phone-makers-revenues-hit-by-chinese-companies/articleshow/68770237.cms?from=mdr> (last visited Aug. 20, 2024).

<sup>127</sup> *Micromax v. Ericsson*, *supra* note 124, at 4.

<sup>128</sup> *Id.*

and thus were ‘discriminatory and in violation of FRAND conditions.’<sup>129</sup> Ericsson took the case to the Delhi High Court, seeking a stay on the Director General's investigation. It further challenged CCI's jurisdiction on passing an order and asked for an injunction with damages against Micromax for violating its SEPs.<sup>130</sup> In an interim solution, the High Court ordered Micromax to pay the royalty based on the prices of the finished product, rejecting Micromax's request to pay on SSPPU. The court set a royalty rate using the comparable license approach and granted a stay on further investigation by CCI or the DG.<sup>131</sup>

In the cases of *Intex vs Ericsson*<sup>132</sup> and *Xiaomi vs Ericsson*<sup>133</sup>, the Delhi High Court took a similar approach, adopting a pro-patent rights view similar to the approach taken by US Federal circuit courts in interpreting FRAND obligations of SEP owners. The Court also issued *injunctions* prohibiting them from importing or selling products using the concerned SEPs during the duration of the proceedings.

However, in 2016, the Delhi High Court approved CCI's jurisdiction to investigate FRAND violations upon abuse of dominance permitting the CCI and the DG to investigate such cases including the earlier ones.<sup>134</sup> The approach of the Delhi High Court has been a cautious one and can be criticised for not favouring the licensees even when most of them were budding domestic start-ups and a major cog in the wheel of the ‘Make in India’<sup>135</sup> vision of the Indian Government.

It can be argued that a lesser royalty under a more licensee-oriented construction of FRAND terms can help them be more competitive, especially when many rival companies are getting the benefits of their states' protectionist policies. However, in economics, such protectionist interventions are argued as myopic,<sup>136</sup> providing a short-term benefit but potentially causing long-term harm. Implications of such policies can only be accessed in the long run.

However, in the meantime, the Delhi High Court has become a hotbed for SEP litigations, with its first post-trial decision coming in 2018 in the combined cases of “*Koninklijke Philips Electronics N.V. vs. Rajesh Bansal*”<sup>137</sup>; and “*Philips vs. Bhagirathi Electronics*”<sup>138</sup>. Herein it found that the defendants had

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<sup>129</sup> *Id.* at 7.

<sup>130</sup> Telefonaktiebolaget LM Ericsson v Mercury Elecs. & Another (2014), Int. App. No. 3825 of 2013, Int. App. 4694 of 2013 in CSO No. 442 of 2013, Delhi H.C. (India).

<sup>131</sup> *Id.* at 1-4.

<sup>132</sup> Telefonaktiebolaget LM Ericsson v Intex Techs. (2015) Limited, Int. App. 6735 of 2014 in CSO No. 1045 of 2014, Delhi H.C. 1, 8, (India).

<sup>133</sup> Telefonaktiebolaget LM Ericsson v Xiaomi Technology and Others (2014), Int. App. 24580 of 2014 in CSO No. 3775 of 2014, Delhi H.C.1-2 (India).

<sup>134</sup> Telefonaktiebolaget LM Ericsson vs Competition Commission Of India (2016), W.P.(C) 464/2014 on Delhi H.C. (India).

<sup>135</sup> ABOUT, MAKE IN INDIA, GOVERNMENT OF INDIA <https://www.makeinindia.com/about> ((last visited Aug. 20, 2024).

<sup>136</sup> Hovenkamp I, *supra* note 14, at 1979.

<sup>137</sup> Koninklijke Philips Electronics N.V. vs. Rajesh Bansal (2018), CS (COMM.) 24/2016 Delhi H.C. (India).

<sup>138</sup> Koninklijke Philips Electronics N.V. vs. Bhagirathi Electronics (2018) CS (COMM.) 436/2017 Delhi H.C. (India).

infringed on Philips SEPs and ordered them to pay damages, as well as one of the defendants was ordered to pay punitive damages also. In June 2021, the Delhi High Court also ordered the first-ever ‘anti-anti-suit injunction’<sup>139</sup> (anti-enforcement injunction) to Xiaomi in the case of *Xiaomi v. IntraDigital*<sup>140</sup>. The High Court held that when Indian jurisdiction is the sole venue competent to decide the claims, a foreign court (in this particular case the *Wuhan Intermediate People's Court, PRC*) cannot prevent a party from bringing its claim before an Indian court.

Recently in *Ericsson v. Lava*<sup>141</sup> case, the Delhi High Court ruled in favor of Ericsson, awarding it INR 244 crores (USD 29 million) in damages.<sup>142</sup> The court found that Lava had infringed upon eight of Ericsson’s Standard Essential Patents (SEPs) related to 2G, 3G, and EDGE technologies.<sup>143</sup> Lava’s defenses, including claims of non-essentiality and patent exhaustion, were rejected due to insufficient evidence. Lava was deemed an unwilling licensee by the court, having failed to engage in good faith negotiations with Ericsson.<sup>144</sup>

The activeness of the Delhi High Court has laid a solid foundation for India to develop its policies on SEPs and FRAND commitments. However, it must ensure that the policies are potent enough to recognise patent hold-up if and where it exists so that their pro-patent stance does not come at the expense of the legitimate interests of the implementors. Easy grant of injunctions can come at the expense of subduing the FRAND commitments. When the other countries are showing restraint in the grant of injunctions, the Delhi HC can take a leaf from their book to not put the implementor at a disadvantage. Amidst the lack of a negotiation protocol (like the one laid by CJEU in *Huawei v. ZTE*), maintaining a window for CCI to begin investigations has been a positive step towards balancing of interests.

## Germany

Germany is the epicentre of IPR based litigation in Europe, with a quick case resolution record, low costs of litigation, and the possibility of getting a reasonable injunction.<sup>145</sup> It was also one of the first courts to decide SEP-related disputes thoroughly. In its landmark ruling on the *orange book standard*<sup>146</sup> case in 2009, the Court invoked competition law to bar injunctive relief in certain cases where a claim to

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<sup>139</sup> Anand, *Indian High Court rules in country's first anti-anti-suit-injunction*, LEXOLOGY Delhi High Court creates history with India's first Anti-Anti-Suit Injunction - Lexology (last visited Aug. 20, 2024).

<sup>140</sup> *Xiomi v. IntraDigital* (2021), Int. App.8772/2020 in CS(COMM) 295/2020 Delhi H.C (India).

<sup>141</sup> *Lava International Limited vs Telefonaktiebolaget Lm Ericsson*, CS(COMM) 65/2016 Delhi H.C (India).

<sup>142</sup> *Id.* at XXXV

<sup>143</sup> *Id.* at XXV

<sup>144</sup> *Id.* at XXI.

<sup>145</sup> Marius Ziph and oths. *The Judicial Geography of Patent Litigation in Germany: Implications for the Institutionalization of the European Unified Patent Court*, MDPI, <https://www.mdpi.com/2076-0760/12/5/311> (last visited Aug. 20, 2024).

<sup>146</sup> *Orange Book Standard* (2009), Docket KZR 39/06 (Germany).

an injunction amounts to an abuse of the patent holder's dominant market position. In this case, a SEP was recognised by the German Federal Supreme Court ‘*Bundesgerichtshof*’ (‘BGH’) as a necessary method of gaining access to a specific marketplace.<sup>147</sup> The court decided that a SEP owner cannot pursue an injunctive relief to prevent a rival from making products that infringe on its SEP. Unless such SEP owner first notifies an infringing party about the breach and then makes a precise formal proposal for a license on a FRAND basis, which must include details of the royalty which it expects.<sup>148</sup> Later in 2015, the Düsseldorf District Court referred the *Huawei vs. ZTE* case (discussed above) to the CJEU and the CJEU expanded the case law and toned down the importance of competition law in the process of granting injunctions.<sup>149</sup>

In the recent decision of *Sisvel v. Haier*<sup>150</sup> with respect to important concerns of SEP litigation in Germany, the Federal Court of Justice provided some additional legal clarity. In terms of FRAND licensing negotiations, the BGH warned that the infringer's behavior should demonstrate sincerity and seriousness.<sup>151</sup> Also, in agreement with the above-mentioned decision of *Unwired* by the High Court of Justice in the U.K., the Federal court ruled that the FRAND royalty rate does not have to be an exact number; instead, it can be a royalty range.<sup>152</sup>

## Republic Of Korea (ROK)

The ROK is a world leader in the number of SEPs reported to the top three SSOs comprising of 23.5 percent of the total declared SEPs.<sup>153</sup> The “Korea Fair Trade Commission”, (“KFTC”) updated its “Guidelines for Review of Unfair Exercise of Intellectual Property Rights (IPR Guidelines)”, in early 2016, allowing for the creation of *de facto* SEPs. According to the KFTC, the IPR guidelines definition of SEPs is limited to De-jure SEPs in which the owners were asked to consent to a wilful commitment to license the SEP in question based on the FRAND commitments in return for their patent being

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<sup>147</sup>James Killick, *ECJ rips up Orange Book! New standards in Europe for SEP injunctions* <http://competitionlawblog.kluwercompetitionlaw.com/2015/09/04/ecj-rips-up-orange-book-new-standards-in-europe-for-sep-injunctions/> (last visited Aug. 20, 2024).

<sup>148</sup> *Id.*

<sup>149</sup> *Id.*

<sup>150</sup> Staff, *Sisvel v Haier, Federal Court of Justice (Bundesgerichtshof)*, [https://caselaw.4ipcouncil.com/german-court-decisions/federal-court-of-justice-bgh/sisvel-v-haier-federal-court-justice-bundesgerichtshof#\\_ftn40](https://caselaw.4ipcouncil.com/german-court-decisions/federal-court-of-justice-bgh/sisvel-v-haier-federal-court-justice-bundesgerichtshof#_ftn40) (last visited Aug. 20, 2024).; *Sisvel v. Haier*, Docket. KZR 36/17 (Germany).

<sup>151</sup> *Id.*

<sup>152</sup> *Id.*

<sup>153</sup> Lee Jihye and Yoon Hee Young, *Korea leads World in No. of Patents Reported to Top 3 Authorities* <https://www.korea.net/NewsFocus/Business/view?articleId=197943> (last visited Aug. 20, 2024).

included in a standard, excluding other used technologies in that relevant area.<sup>154</sup> The IPR Guidelines outline the grounds for assessing whether a refusal of a license is unlawful.

In terms of antitrust enforcement, the KFTC's record-breaking penalty of USD 854 million levied on Qualcomm in 2016 had summoned international attention.<sup>155</sup> According to the KFTC, Qualcomm took advantage of its dominant position in the market by denying for licensing of SEPs and forcing unfair contracts such as grant-back requirements and superfluous package licensing, among other things. The fine imposed by the KFTC on Qualcomm is one of the highest ever levied against a SEP holder. It demonstrates the lengths to which antitrust authorities can go to safeguard the market from the abuse of dominant forces.

*Samsung v. Apple*<sup>156</sup> was a well highly-publicized SEP-related case in Japan in 2011 that had sparked FRAND-related discussions. it.<sup>157</sup> In 2011, Apple filed a patent infringement lawsuit against Samsung, alleging that the patents at issue were related to the iPhone's design.<sup>158</sup> The court decided that both the sides involved in the contract negotiations owe each other a duty of good faith to present each other with the relevant information and to bargain in good faith towards the conclusion of the license agreement.<sup>159</sup> Japan has regulated the relationship between SEP owners and Implementers fairly actively. 'The Japan Fair Trade Commission' ('JFTC'), in the year 2016, issued revised 'Guidelines for the Use of Intellectual Property under the Antimonopoly Act'. It defined the criteria to be used to determine whether a SEP owner had violated antitrust laws by requesting injunctions.<sup>160</sup> The amendment's main focus was on the refusal of a license or filing of a claim for injunction by the SEP owner. It clarified such an act by a party may be considered an act of private monopolisation, and an injunction against an entity ready to take a license can be considered an unfair trade practice.<sup>161</sup> Furthermore, if an owner of SEPs which has expressed its willingness to give SEPs on FRAND terms declines to license or seeks injunctive relief against a firm ('willing licensee') prepared to accept SEPs on FRAND terms can violation of the Anti-Monopoly laws as well.<sup>162</sup>

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<sup>154</sup> Jianmin Dai, *Competition and Antitrust Enforcement against Standard Essential Patent in Asia: Introduction and Overview*, 62 ANTITRUST BILLS. 443, 445 (2017).

<sup>155</sup> Se Young Lee, Stephen Nellis, *South Korea fines Qualcomm \$854 million for violating competition laws*, Reuters, <https://www.reuters.com/article/us-qualcomm-antitrust-idUSKBN14H062> . (last visited Aug. 20, 2024).

<sup>156</sup> Hiroko Tabuchi and Nick Wingfield, *Tokyo Court Hands Win to Samsung Over Apple*, <https://www.nytimes.com/2012/09/01/technology/in-japan-a-setback-for-apples-patent-fight.html> (last visited Aug. 20, 2024).

<sup>157</sup> Reuters Staff, *Samsung wins over Apple in Japan patent case*, REUTERS, <https://www.reuters.com/article/apple-samsung-japan/samsung-wins-over-apple-in-japan-patent-case-idUSL2E8JU0Y420120831> (last visited Aug. 20, 2024).

<sup>158</sup> Id.

<sup>159</sup> Jianmin Dai, *Competition and Antitrust Enforcement against Standard Essential Patent in Asia: Introduction and Overview*, 62 ANTITRUST BILLS. 443, 444 (2017).

<sup>160</sup> Guidelines For The Use Of Intellectual Property Under The Antimonopoly Act, Japan Fair Trade Commission <https://www.jftc.go.jp/en/pressreleases/yearly-2016/january/160121.html> Last Visited Aug. 20, 2024).

<sup>161</sup> Id.

<sup>162</sup> Id.

In 2018 the “Japan Patent Office” (“JPO”) published the “Guide to Licensing Negotiations involving Standard Essential Patents”.<sup>163</sup> This Guide was aimed at improving openness and predictability, simplifying talks between rights holders and implementers, and assisting in preventing or swiftly resolving SEP-related issues, an attempt toward a more balanced regime.<sup>164</sup> Japan's approach has been proactive, and it is ready to deploy enforcement Anti-Monopoly laws to reduce the risk of standardisation of SEPs

## Conclusion

All the aforementioned economies have acknowledged the issue of patent hold-up and have attempted to limit the use of automatic injunctions in cases of FRAND-encumbered SEPs. The United States and India have taken a pro-patent stance and antitrust action has been limited. The US has taken a cautious approach in granting injunctions, whereas India has granted injunctions liberally. The EU, Germany, and the United Kingdom have taken a neutral approach, establishing negotiation protocols that fairly distribute the burden of agreeing on a FRAND royalty rate between the SEP holder and the implementer. The UK has even attempted to define a clear antitrust enforcement scope, defining when FRAND is sufficient and when antitrust is required to advance a remedy. Japan, the Republic of Korea, and the People's Republic of China have shown a tilt toward the implementer, using anti-monopoly laws to limit SEP owners.

With the global convergence of royalty-setting approaches and courts taking the liberty to grant a worldwide license, precedents have been established that allow courts of different jurisdictions to learn from each other's assessments, resulting in a more predictable royalty rate. The system is moving towards greater consistency, and the European courts have led the way in showing how to strike a balance between the interests of the owner and the implementor. Courts of different jurisdictions have given different explanations. Still, instead of creating a problem, it has helped the courts to build upon each other's experiences thereby gradually moving towards a global convergence in the understanding of FRAND commitments and royalty determination. With more clarity on its reach and limits, a more dependable SEP licensing framework can be built with a lesser need for antitrust interventions.

Both a pro-patentee approach, which provides the SEP owner with automatic injunctive reliefs, and a pro-licensee approach, which eliminates the possibility of an injunction, encourage the respective parties to engage in aggressive conduct. It is acceptable to burden the SEP holder to clearly and unambiguously notify the implementer in detail of the SEP infringements and propose a FRAND offer. However, the

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<sup>163</sup> GUIDE TO LICENSING NEGOTIATIONS INVOLVING STANDARD ESSENTIAL PATENTS, JAPAN PATENT OFFICE) <https://www.jpo.go.jp/e/system/laws/rule/guideline/patent/seps-tebiki.html> (last visited Aug. 20, 2024).

<sup>164</sup> *Id.*



SEP holder should retain the freedom to reject any counter offers until it can negotiate a desirable contract while remaining inside the FRAND limits. Following the breakdown of negotiations, both parties should agree to let a neutral forum decide the rate. A negotiation protocol that places equal duty on the firms to engage in good faith negotiations is the key to preventing both patent hold-up and hold-out.

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