

## Globalisation and FRAND – IP & Competition Law Perspective

Vishv Priya Kohli\*

### *Abstract*

*The paper addresses the status of regulation of Standard Essential Patents (SEPs) in the era of globalisation and the diversity of ways in which FRAND (Fair, Reasonable and Non-Discriminatory) principles are being applied internationally. SEPs represent the core innovation in an industry and protect innovation that has taken extraordinary effort to develop. Smart phones, tablets, connected cars, smart home applications, smart retail, gaming technologies and connected healthcare are some of the examples entailing use of SEPs. Arriving at a consensus regarding application of FRAND terms at the global level, may be the need of the hour. The manner in which FRAND terms are being applied in different jurisdictions including the US and within the EU are different. Therefore, the task of arriving at a consensus is not straightforward. The paper, at first, explores the concept of SEPs, contextualises and establishes the relevance of addressing the issue. Thereafter, in the light of the recent case law – analyses the way in which FRAND terms are being interpreted in different jurisdictions, specifically within the EU and the United States. This is followed by presentation of the IP and competition law perspective. The paper concludes with a proposition for identifying the path forward.*

Keywords: SEPs, FRAND, Licensing terms, Patents, SSOs, Hold up, Hold out, patent thickets

### **Introduction**

The era of globalisation<sup>1</sup> and the age of platforms and new technologies have

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\* Assistant Professor, Ph.D., CBS LAW, MPP, Copenhagen Business School, Denmark.

<sup>1</sup> The term globalisation is generally used to describe an increasing internationalisation of markets for goods and services, the means of production, financial systems, competition, corporations, technology and industries. Amongst other things this gives rise to increased mobility of capital, faster propagation of technological innovations and an increasing

transformed the manner of social and economic interactions, healthcare, education, and gaming. The use of connected cars,<sup>2</sup> eHealth,<sup>3</sup> online shopping, online banking, social interactions through facebook, whatsapp, online gaming, mobile phones<sup>4</sup> with a multiplicity of applications (apps) – are just a few examples of how many are making use of technology and platforms. Even business and creative fields such as art and music are benefitting from the use of new innovations made possible by new platforms and technology. While accessibility of information is facilitated at an extremely high speed, it has also brought in its wake certain legal, social, and economic challenges that need to be addressed. Issues such as contractual restrictions, development of technology standards and restrictions with respect to using technology and platforms resulting in restrictions in trade are some of the primary concerns.

Historically, the traditional method of dealing with broad challenges experienced on a large scale, has been to set standards. In fact, we live in a society based on standards, be it economic, social or technical standards.<sup>5</sup> Usually, a standard is defined as collection of rules and guidelines that secure interoperability.<sup>6</sup> Standards ensure efficiency in the market in dealing with the technological changes and facilitate coordination at the incipient stage of development of any given change in technological development.<sup>7</sup> A commonly used standard, such as a ‘A4 size’ for sheets of paper, is an instance of what enhances value of the product for manufacturers and consumers alike. Another example of the importance of technical standards is from the

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interdependency and uniformity of national markets. (Manual on Statistics of International Trade in Services, Eurostat, IMF, OECD, UN, UNCTAD, WTO, 2002 – Annex II, Glossary. [http://unstats.un.org/unsd/publication/Seriesm/Seriesm\\_86e.pdf](http://unstats.un.org/unsd/publication/Seriesm/Seriesm_86e.pdf)

<sup>2</sup> Pawel Gora & Inga Rüb, *Traffic Models for Self-Driving Connected Cars*, 14 TRANSPORTATION RESEARCH PROCEEDIA 2207-2216 (2016).

<sup>3</sup> World Health Organization. *Global diffusion of eHealth: making universal health coverage achievable: report of the third global survey on eHealth*. World Health Organization, 2017.

<sup>4</sup> Sukanta Chandra Swain & Ramnish Singh, *Enterprise of Future: Leveraging Information, Communication and Technology (ICT) and Social Interactions (SI) for Growth*. in Suresh Chandra Satapathy, Vikrant Bhateja, J.R. Mohanty Siba K. Udgata (eds), SMART INTELLIGENT COMPUTING AND APPLICATIONS. SMART INNOVATION, SYSTEMS AND TECHNOLOGIES, VOL 160. (Springer 2020)

<sup>5</sup> Knut Blind & Brian Kahin, *Standards and the Global Economy* in JORGE L. CONTRERAS, THE CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS (Cambridge University Press, 2018).

<sup>6</sup> Catharina Maracke, *Free and Open Source Software and FRAND-based patent licenses: How to mediate between Standard Essential Patent and Free and Open Source Software*, 22(3-4) THE JOURNAL OF WORLD INTELLECTUAL PROPERTY 78-102 (2019).

<sup>7</sup> Charles P. Kindleberger, *Standards as Public, Collective and Private Goods*, 36(3) KYKLOS 377-396 (1983).

telecommunication industry. There are different types of technologies that are employed and include wireless broadband technologies. For instance, WiFi, video compression technologies (H.264), or telecommunications standards (4G LTE).<sup>8</sup> Use of each type of technology has been facilitated by reaching an agreement on the thousands of SEPs involved in each of these technologies. The advent of 5G is a noteworthy example and of crucial importance for the Internet of Things (IoTs). A wider discussion on the new standard hails it as an investment of the new decade. On the one hand, standards assist in establishing a common denominator and lay down a benchmark. On the other hand, standard can also wipe out approaches that do not fit with the standard but could be better than the specified standard.<sup>9</sup>

Different technical standards are articulated in diverse ways, depending upon the industry and the country concerned. Usually such standards are enforced through the legal framework in any given country or region. This may occur either through regulations or guidelines or by designing of standard contracts.

For instance, the European Union (hereinafter referred to as ‘the EU’) is no exception. Within the EU a wide spectrum of measures have been undertaken in the past two decades and especially in the last couple of years.<sup>10</sup> In 2014, the European Commission (EC) recognized the issues existing in SEP licensing and explored possible ways to counter the problems that were identified.<sup>11</sup> This was followed up by a public consultation<sup>12</sup> on the matter and a plethora of studies such as Transparency, Predictability, and Efficiency of SSO – based Standardization and SEP Licensing;<sup>13</sup> Patent Assertion Entities

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<sup>8</sup> Michael A. Carrier, *A Roadmap to the Smartphone Patent Wars and FRAND Licensing*, 2 CPI ANTITRUST CHRONICLE (2012).

<sup>9</sup> Rupperecht Podszun, *Standard Essential Patents and Antitrust Law in the Age of Standardisation and the Internet of Things: Shifting Paradigms*, 50(6) IIC 720–745 (2019), <https://doi.org/10.1007/s40319-019-00831-y>

<sup>10</sup> EUROPEAN COMMISSION, SETTING OUT THE EU APPROACH TO STANDARD ESSENTIAL PATENTS, 29.11.2017, COM (2017) 712 final; Patricia Cappuyns, Jozefein Vanherpe, *Europe Takes on FRAND Licensing—Again*, LII LES NOUVELLES 122 (2017).

<sup>11</sup> EUROPEAN COMMISSION, PATENTS AND STANDARDS: A MODERN FRAMEWORK FOR IPR-BASED STANDARDISATION (2014) <http://doi.org/10.2769/90861> accessed on April 27 2020.

<sup>12</sup> EUROPEAN COMMISSION, PUBLIC CONSULTATION ON PATENTS AND STANDARDS—A MODERN FRAMEWORK FOR STANDARDISATION INVOLVING INTELLECTUAL PROPERTY RIGHTS (2015).

<sup>13</sup> PIERRE REGIBEAU, RAPHAEL DE CONINCK & HANS ZENGER, TRANSPARENCY, PREDICTABILITY, AND EFFICIENCY OF SSO-BASED STANDARDIZATION AND SEP LICENSING (Report for European Commission 2016), [https://ec.europa.eu/growth/content/study-transparency-predictability-and-efficiency-ssobased-standardization-and-sep-0\\_en](https://ec.europa.eu/growth/content/study-transparency-predictability-and-efficiency-ssobased-standardization-and-sep-0_en).

in Europe;<sup>14</sup> and Licensing Terms of SEPs.<sup>15</sup> The most recent effort made at the EU Commission level is the articulation of the policy in the report, ‘Setting out the EU Approach to SEPs’ in 2017.

It would be ideal to commence the discussion by establishing what SEPs are and what is meant by the term FRAND and why they are attracting so much attention.

## Standard Essential Patents and FRAND

The area of law that addresses protection of intellectual property is categorized as Intellectual Property (IP) Law. Like other property rights, it is an exclusionary right. It empowers the owner of the IP to exclude others from using the IP in question.<sup>16</sup> IP rights encompass protection of a wide range of IP such as copyrights (for protection of literary and artistic works), trademarks (for protection of trademarks), designs (for protection of designs) and patents. Patents usually cover technological inventions that may relate to a ground-breaking new product or maybe an enhancement to an already existing product. It may also entail just a process, which is brand new. Patents award exclusive rights to the owner of the patent for making the patented product or using the patented process.<sup>17</sup> Traditionally, patents are territorial in nature, like all other forms of IP.<sup>18</sup> The main purpose of seeking patents is to prevent imitations<sup>19</sup> in the market and enjoying the fruits of labour for a limited period of time.

Standard Essential Patents (SEPs), lie under the broad umbrella of patents and refer to the type of patent that cannot be done without. SEPs are the

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<sup>14</sup> NIKOLAUS THUMM & GARRY GABISON, PATENT ASSERTION ENTITIES IN EUROPE: THEIR IMPACT ON INNOVATION AND KNOWLEDGE TRANSFER IN ICT MARKETS (JRC Science for Policy Report 2016), <http://publications.jrc.ec.europa.eu/repository/handle/JRC103321>.

<sup>15</sup> CHRYSOULA PENTHEROUDAKIS & JUSTUS A BARON, LICENSING TERMS OF STANDARD ESSENTIAL PATENTS (JRC Science for Policy Report 2017), <https://doi.org/10.2791/32230>.

<sup>16</sup> JAY DRATLER JR & STEPHEN M. MCJOHN, INTELLECTUAL PROPERTY LAW: COMMERCIAL, CREATIVE AND INDUSTRIAL PROPERTY (Law Journal Press 2020).

<sup>17</sup> PAUL TORREMANS, HOLYOAK AND TORREMANS INTELLECTUAL PROPERTY LAW (Oxford University Press 2019).

<sup>18</sup> However, recent technological developments and the era of platforms are challenging this traditional understanding.

<sup>19</sup> Gaetan de Rassenfosse, Dominique Guellec, Bruno van Pottelsberghe, *Motivations to Patent*. (Apr. 28, 2008) [https://www.researchgate.net/profile/Gaetan\\_De\\_Rassenfosse2/publication/237433666\\_Motivations\\_to\\_Patent\\_Empirical\\_Evidence\\_from\\_an\\_International\\_Survey24/links/54edcfc90cf2e2830863813f/Motivationsto-Patent-Empirical-Evidence-from-an-International-Survey24.pdf](https://www.researchgate.net/profile/Gaetan_De_Rassenfosse2/publication/237433666_Motivations_to_Patent_Empirical_Evidence_from_an_International_Survey24/links/54edcfc90cf2e2830863813f/Motivationsto-Patent-Empirical-Evidence-from-an-International-Survey24.pdf).(Last Visited 21/10/2021)

kind of patents that are necessary for compliance with the technical standards of the industry concerned.<sup>20</sup> SEPs represent the core innovation in an industry and protect innovation that has taken extraordinary effort to develop. Smart phones, tablets, connected cars, smart home applications, smart retail, gaming technologies and connected healthcare are some of the examples encompassing use of SEPs. SEPs have become pivotal to patent wars,<sup>21</sup> especially in context of information and communication technology (ICT) industry. Most of the tech giants – Apple, Motorola, Ericsson, Nokia, Microsoft, and Samsung are embroiled in such patent wars. In this context, the Samsung<sup>22</sup> and Motorola cases,<sup>23</sup> where the former dealt with enforcement of Universal Mobile Telecommunications Service (UMTS)<sup>24</sup> standard essential patents and the latter dealt with the enforcement of General Packet Radio Service (GPRS) standard essential patents, are well-known.

Contrary to SEPs, non-essential patents (non-SEPs) do not result in hold up<sup>25</sup> of an entire industry like “slide-to-unlock” patents, which can be developed by applying different methodologies by companies.<sup>26</sup> Therefore, non-SEPs do not result in as much litigation. The volume of case law in the past six years is indicative of the fact that a clear solution is not in sight<sup>27</sup> and the problems associated with SEPs, even at the administrative level are growing.<sup>28</sup> Even though Fair Reasonable and Non-Discriminatory (FRAND) terms became the new anthem and were imbibed in guidelines in many regions such as the United States, the EU, China and Japan, it has come to light that FRAND

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<sup>20</sup> Nataliia Kozachuk, *Counteracting SEP Abuse: In Search of a WTO-Consistent Approach*, 53(1) J. OF WORLD TRADE 153-167 (2019).

<sup>21</sup> STANDARD ESSENTIAL PATENTS, COMPETITION POLICY BRIEF, Issue 8, June 2014, ISBN 978-92-79-35553-0, ISSN:2315-3113.

<sup>22</sup> Case AT.39939-Samsung, Commission Decision of 29 April 2014, IP 14/490.

<sup>23</sup> Case AT.39985-Motorola, Commission decision of 29 April 2014, IP 14/489.

<sup>24</sup> *Universal Mobile Telecommunications System: A System For Sending Text, Voice, And Video Data To Mobile Phones And Computers*, <https://dictionary.cambridge.org/dictionary/english/umts> (last visited Apr. 27, 2020).

<sup>25</sup> Jorge L. Contreras, *Much Ado About Hold-up.*, 2019 U. OF ILL. L. REV. 875 (2019)

<sup>26</sup> *Standard Essential Patents*, COMPETITION POLICY BRIEF, Issue 8, June 2014, ISBN 978-92-79-35553-0, ISSN:2315-3113.

<sup>27</sup> European Commission, *Public Consultation on Patents and Standards—A Modern Framework for Standardisation Involving Intellectual Property Rights* 126 (2015).

<sup>28</sup> Aija Leiponen & Henry Delcamp, *The anatomy of a troll? Patent licensing business models in the light of patent reassignment data*, 48(1) RESEARCH POLICY 298-311 (2019); Justus Baron, *Counting standard contributions to measure the value of patent portfolios—A tale of apples and oranges*, 44(3) TELECOMM. POLICY (2020).

for one, is not FRAND for all.<sup>29</sup> The interpretation of what is fair, reasonable and non-discriminatory in one jurisdiction may not be the same in another jurisdiction.<sup>30</sup>

While dissecting the meaning and import of what is meant by non-discriminatory, Dennis Carlton and Alan Shapiro<sup>31</sup> have offered a recommendation based on economics. It is suggested that non-discriminatory terms should address that all ‘similarly situated’ firms must pay similar royalty rates. However, there is still no common understanding on the issue. The UK courts have adopted a different understanding as is evident from the *Unwired Planet v. Huawei* case.<sup>32</sup>

Another crucial point to be noted is that FRAND is a term of contract. Any violations would naturally, be dealt under law of contracts.<sup>33</sup> The origin of FRAND terms can be traced to French contract law.<sup>34</sup> Some jurisdictions, such as the UK and the US courts<sup>35</sup> have begun following this course. While a trend can be identified, there is no universal commonly accepted definition of FRAND terms either.<sup>36</sup> It is evident that comparable rates approach is applied in most jurisdictions while determining what may be construed as fair and reasonable. *Microsoft v. Motorola*<sup>37</sup> and *TCL v. Ericsson*<sup>38</sup> are just two

<sup>29</sup> Doris Johnson Hines & Ming Tao- Yang, *Worldwide Activities on Licensing Issues relating to Standard Essential Patents*, WIPO MAGAZINE (Feb. 2019), [https://www.wipo.int/wipo\\_magazine/en/2019/01/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2019/01/article_0003.html)

<sup>30</sup> *Ibid.*

<sup>31</sup> Dennis W. Carlton and Allan L. Shampine, *An Economic Interpretation of FRAND*, 9(3) J. OF COMP. L. & ECON. 531-546 (2013).

<sup>32</sup> *Unwired Planet International Ltd. And another v Huawei Technologies (UK) Co. Ltd. and another* UKSC 2018/0214; Sophie Lawrance & Francion Brooks, *Unwired Planet v Huawei: The UK Court of Appeal Upholds FRAND Determination*, 10(3) J. OF EUR. COMP. L. & PRAC. 180-196 (2019); Torsten Korber, *Abuse of a dominant position by legal actions of owners of standard-essential patents: Huawei Technologies Co. Ltd v. ZTE Corp.*, 53 COMMON MARKET L. REV. 1107 (2016).

<sup>33</sup> Damien Geradin, *SEP Licensing After two Decades of Legal Wrangling: Some Issues Solved, Many Still to Address*, TILEC DISCUSSION PAPER DP2020-040 (2020), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3547891](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3547891)

<sup>34</sup> *Ibid.*

<sup>35</sup> *Microsoft Corp. v. Motorola Inc.*, 696 F.3d 872 (2012); *Unwired Planet v. Huawei*, [2017] EWHC 711 (Pat.), at §§ 140 et seq.

<sup>36</sup> Damien Geradin & Miguel Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-up, Royalty-Stacking and the Meaning of FRAND*, 3 EUROPEAN COMPETITION L. J. 101 (2007).

<sup>37</sup> *Microsoft Corp. v. Motorola, Inc.*, 864 F. Supp. 2d 1023, 1031 (W.D. Wash. 2012).

<sup>38</sup> *TCL Comm. Technology Holdings Ltd. v. Telefonaktiebolaget LM Ericsson, et al.*, No. 8:14-cv-341 (C.D. Cal. 2017).

examples which illustrate this approach.<sup>39</sup> However, there are other countries that do not agree.<sup>40</sup>

## Case Law

New law suits are raising their heads often enough to grab the attention of the media, practitioners and academicians. As established in Section 1, patents are territorial rights. However, technological developments challenge the traditional understanding and push boundaries keenly maintained by legal frameworks across the globe. Recent case law from the US indicates that different conclusions have been arrived at in different jurisdictions, even when facts of the matter were similar. Some cases have resulted in establishment of global FRAND terms, others have been awarded damages for extraterritorial harms. For instance, in *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024 (9th Cir. 2015) and *TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, Case No. SACV 14-341 JVS (DFMx) (C.D. Cal. Dec. 22, 2017) the court determined the terms of a global FRAND license by the consent of the parties. In *Optis Wireless Tech., LLC v. Huawei Techs. Co.*, Civ. Action No. 2:17-cv-123-JRG-RSP (E.D. Tex. Aug., 9, 2018), the court adjudicated and determined the terms of a global FRAND license rates, without considering the question of consent of parties to the case.

Likewise, in the European Union, there have also been a number of cases. The *Huawei v. ZTE*<sup>41</sup> being one of the significant cases, wherein the Court of Justice of the European Union (CJEU) established a SEP-framework that entails five key considerations. For instance, the SEP holder must, before bringing an action for injunctive relief, give notice to the alleged infringer of the infringement by designating the SEP in question and specifying the way in which it has been infringed. If an SEP holder seeks an injunction without complying with the key considerations, a court may permit the alleged infringer to raise the "FRAND defense." In other words, argue that a license for the SEP was not offered on FRAND terms. It was established in the case that a SEP not offered for license on FRAND terms could constitute an abuse

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<sup>39</sup> Liyang Hou, *The essential facilities doctrine – what was wrong in Microsoft?* 43 IIC 451–471 (2012).

<sup>40</sup> HARIS TSILIKAS, ANTITRUST ENFORCEMENT AND STANDARD ESSENTIAL PATENTS 32 (Nomos 2015).

<sup>41</sup> C 170/13, *Huawei Technologies Co. Ltd v. ZTE Corp., ZTE Deutschland GmbH*, ECLI:EU:C:2015:477; Pedro Henrique D. Batista & Gustavo Cesar Mazutti, *Comment On "Huawei Technologies" (C-170/13): Standard Essential Patents And Competition Law—How Far Does The CJEU Decision Go?* 47(2) IIC 244–253(2016). <https://doi.org/10.1007/s40319-016-0447-z>.

of market position, a violation of EU Competition laws.

As an aftermath of the Huawei judgment of the CJEU, there have been a number of cases across Europe. For instance, Philips litigation in the Netherlands, France<sup>42</sup> and Germany (Philips v. Archos, Regional Court Mannheim, Germany)<sup>43</sup> indicated that different jurisdictions arrived at divergent conclusions even though the facts of a case and the guidelines to be applied to the cases were the same. This highlights the differences in understanding and perception. Similar results have been experienced in the UK in *Unwired Planet International Ltd. and another v Huawei Technologies (UK) Co. Ltd.*<sup>44</sup> and in the joined cases, *Huawei Technologies Co. Ltd. and another v Conversant Wireless Licensing SARL*.<sup>45</sup> The Unwired planet case is now pending before the Supreme Court in the UK and it addresses a larger question about jurisdiction of the court in the UK to entertain the case and rule on it. It has been submitted that the majority of patents in the current case were issued outside the UK. The main market for the products impacted is China and the devices in question were exclusively manufactured in China. Therefore, a global consternation is palpable concerning this particular case and the final judgment is eagerly awaited.

## Common Problems

Undeniably, standards facilitate interoperability and compatibility of products or services and assist in permeation of benefits of technologies and platforms. Being a fluid area, SEPs is fraught with danger and scope for abuse. Various problems have been identified that fall within the spectrum of ranging from specific issues related to IP law, competition law to broader fundamental issues of jurisdiction, territoriality. In addition, there are also challenges pertaining to specific bodies that are instrumental in management of SEPs – Standard Setting Organisations (SSOs) as well as Non-Participating Entities (NPEs).

The normal practice to resolve a conflict relating to IP matters such as patents would be to employ IP law. However, in case of SEPs, the traditional method does not appear to be adequate. For instance, the dispute between Apple and

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<sup>42</sup> *Philips v. Wiko SAS* (France), Case No. C/09/511922/HA ZA 16-623 (2 July, 2019).

<sup>43</sup> *Philips v. Archos*, Regional Court Mannheim, Germany; judgments of July 1, 2016 (7 O209/15) and November 17, 2016 (7O 19/16).

<sup>44</sup> *Unwired Planet International Ltd. And another v Huawei Technologies (UK) Co. Ltd.* and another UKSC 2018/0214.

<sup>45</sup> Joined cases *Huawei Technologies Co. Ltd. And another v. Conversant Wireless Licensing SARL* UKSC 2019/0041 and *ZTE Corporation and another v. Conversant Wireless Licensing SARL* UKSC 2019/0042.



Samsung over SEPs were initiated in fifty different law suits in ten countries,<sup>46</sup> which is an indication of the complexity and inability of the current legal framework to deal with the issue satisfactorily. In the realm of competition law, abuse of dominant position, royalty stacking,<sup>47</sup> refusal to license, ‘hold up’ and ‘hold out’ or ‘reverse hold up’ are some of the key issue that have been identified as problematic in context of SEPs.

In addition, there are broader concerns that have surfaced in context of globalisation and FRAND licensing terms in context of SEPs. Firstly, the question of jurisdiction and territoriality, as raised in the Unwired case, pending before the UK Supreme Court. Specifically, can one country adjudicate on a matter that will have an impact on exercise of rights in other countries as well? This is by no means an issue that has emerged in context of SEPs alone. It has been addressed in exercise of other forms of IP as well.<sup>48</sup> Another major issue pertains to the possibility of forum-shopping that may be unleashed if there are no universal or global agreements. Forum shopping involves the practice of strategically searching for the court where action may be brought guided by the likelihood of receiving the most favourable result.<sup>49</sup> This practice will have the potential for targeting the most beneficial place for the SEP owner and a practice of leveraging and sidestepping laws of other countries may ensue.

Another critical consideration is that patent laws, damages doctrines, SEP portfolios can differ from country to country because each country is unique. Even within the EU, different approaches are apparent in different Member States. For instance, the German courts tendencies to grant injunctions have compelled certain sections to call for a proportionality review of patent injunctions under German law, in the light of the proportionality principle of the Enforcement Directive.<sup>50</sup> In addition, the business models and licensing strategies can differ from industry to industry, within the same region and can

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<sup>46</sup> Florian Möller, *List of 50+ Apple-Samsung lawsuits in 10 countries*, FOSS PATENTS (Apr. 28, 2012, 08:24 AM) <http://www.fosspatents.com/2012/04/list-of-50-apple-samsung-lawsuits-in-10.html>.

<sup>47</sup> Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS L. REV. 1991-2049 (2007).

<sup>48</sup> Vishv Priya Kohli, *Square Pegs in Triangular Spaces: Right to be Forgotten*, 2 E.I.P.R 75-77 (2020).

<sup>49</sup> “Forum shopping”, Merriam-Webster.com Legal Dictionary, Merriam-Webster, <https://www.merriam-webster.com/legal/forum%20shopping>. (last visited April 26, 2020).

<sup>50</sup> Maurits Dolmans, *We need proportionality review for patent injunctions under German law*, Presentation made at Conference on Component-Level Licensing, 12 November 2019,

have an impact of SEPs in the particular industry.<sup>51</sup>

Further, issues pertaining to Standard Setting Organisations (SSOs) have an undeniable impact on the management of SEPs. A few of the pertinent issues include lack of clear rules and procedures on the inclusion of patented technologies; problems related to declaration systems, transfer rules, patent pools, FRAND definition, and dispute resolution.<sup>52</sup> Adding complexity to the issue of SEPs is the increasing involvement of NPEs (non-practicing entities) in FRAND disputes. The current data shows that in the U.S. 77.5% of SEPs infringement and validity actions involved NPEs.<sup>53</sup> In Europe, it amounts to 43.9%. It has become obvious that SEPs are being targeted and are being viewed as a lucrative source of revenue.<sup>54</sup> The negative impact of the presence of NPEs pertains to the data that illustrates that patents have, increasingly, begun to create hurdles in diffusion of innovation.<sup>55</sup>

## IP law & Competition law Perspective

IP law and competition law have been viewed as uneasy cousins. Within the realm of IP law, Patent law provides exclusive rights to the patent owner for a limited period of time. Whereas Competition law aims to promote free competition in the market enabling as many as possible to participate and prosper. The aims of Patent law and Competition law intersect, however,

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Brussels, referred to by Florian Müller in German patent reform discussed at Brussels conference: automatic injunctions contravene EU law), 18 November 2019, [www.fosspatents.com/2019/11/german-patent-reform-discussed-at.html](http://www.fosspatents.com/2019/11/german-patent-reform-discussed-at.html) [www.fosspatents.com/2019/11/german-patent-reform-discussed-at.html](http://www.fosspatents.com/2019/11/german-patent-reform-discussed-at.html).

<sup>51</sup> MENIERE Y. FAIR, REASONABLE AND NON-DISCRIMINATORY (FRAND) LICENSING TERMS. RESEARCH ANALYSIS OF A CONTROVERSIAL CONCEPT. EUR 27333 (Publications Office of the European Union, 2015) JRC96258.

<sup>52</sup> PIERRE REGIBEAU, RAPHAEL DE CONINCK & HANS ZENGER, TRANSPARENCY, PREDICTABILITY, AND EFFICIENCY OF SSO-BASED STANDARDIZATION AND SEP LICENSING (Report for European Commission 2016), [https://ec.europa.eu/growth/content/study-transparency-predictability-and-efficiency-ssobased-standardization-and-sep-0\\_en](https://ec.europa.eu/growth/content/study-transparency-predictability-and-efficiency-ssobased-standardization-and-sep-0_en).

<sup>53</sup> Valerio Sterzi, *Assessing the effect of Non Practising Entities on Innovation Diffusion*, Paper presented at the 4th IP Competition Law Symposium at Oxford University, 18th October 2019.

<sup>54</sup> Gianluca Orsatti & Valerio Sterzi, *NPEs, the Market for Patents and Follow-on Innovation. Evidence from Patent Transfers at the USPTO* (2019), <https://npeic.org/wp-content/uploads/2020/03/Orsatti-and-Sterzi-2019.pdf>; Gianluca Orsatti & Valerio Sterzi, *Do Patent Assertion Entities Harm Innovation? Evidence from Patent Transfers*, CAHIERS DU GRETHA 2018-08 (2018).

<sup>55</sup> Valerio Sterzi, *Assessing the effect of Non Practising Entities on Innovation Diffusion*, Paper presented at the 4th IP Competition Law Symposium at Oxford University, 18th October 2019.

when it comes to promotion of innovation in society.<sup>56</sup>

On the one hand, patent and standards have a common goal of encouraging innovation and rendering assistance in diffusion of technology. On the other hand, their relation is also an antagonistic one. It is an area replete with strategic patenting with overlapping rights, patent ambushes and hold-up situations. From the nascent stages of the innovation cycle, vested interests influence the standardization process and attempt to mold and manipulate market conditions for both competition and the end users of the system.<sup>57</sup>

Further, the quality of patents and density of patents illustrates another issue of over-declaration and weak patents. It is obvious that the problem of over-declaration is driven by the commitment to disclose any patent that could be essential, as soon as possible. Consequently, even ‘weak’ patents, which may only be slight improvements on previous inventions tend to appear.

Therefore, patent law has been labelled as being in a state of crisis by some<sup>58</sup> while other scholars have directly questioned the value of patent protection to innovation.<sup>59</sup> European Commission has also put patent law under the critical microscope and implied that patent law is laced with problems.<sup>60</sup> In recent years, the Commission has dealt with patent-related competition problems, particularly in connection with the markets for pharmaceuticals and telecommunications on a regular basis.<sup>61</sup>

As far back as 2001, Carl Shapiro, the innovation economist, rang the alarm bell, when he put forward a fundamental criticism of the promotion of innovation through patent law: “In short, our patent system, while surely

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<sup>56</sup> European Commission’s technology-transfer guidelines, COM, Guidelines on the application of Art. 101 TFEU to technology-transfer agreements, 2014/C 89/03, para. 7; ALAN DEVLIN, *ANTITRUST AND PATENT LAW 59* (Oxford University Press 2016).

<sup>57</sup> CHRYSOULA PENTHEROUDAKIS & NIKOLAUS THUMM, *INNOVATION IN THE EUROPEAN DIGITAL SINGLE MARKET: THE ROLE OF PATENTS* (JRC Science and Policy Report 2015).

<sup>58</sup> ALAN DEVLIN, *ANTITRUST AND PATENT LAW 59* (Oxford University Press 2016).

<sup>59</sup> Heidi L. Williams, *How do patents affect research investments?* NBER Working Paper 23088 (2017), <http://www.nber.org/papers/w23088> (Last visited Apr. 27, 2020); Robin Feldman & Mark A. Lemley, *Do patent licensing demands mean innovation?*, 101 IOWA L. REV. 137 (2015); CHRYSOULA PENTHEROUDAKIS & NIKOLAUS THUMM, *INNOVATION IN THE EUROPEAN DIGITAL SINGLE MARKET: THE ROLE OF PATENTS* (JRC Science and Policy Report 2015).

<sup>60</sup> Margrethe Vestager, 19th IBA competition conference Florence (2015), [https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/intellectual-property-and-competition\\_en](https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/intellectual-property-and-competition_en) (Last visited Apr. 27, 2020)

<sup>61</sup> Rupperecht Podszun, *Immaterialgüterrecht Geistiges Eigentum und Kartellrecht*, 6 JURA 437–443 (2010)

a spur to innovation overall, is in danger of imposing an unnecessary drag on innovation by enabling multiple rights owners to “tax” new products, processes and even business methods”<sup>62</sup>. According to him and a few significant others,<sup>63</sup> patent law does not promote innovation, despite the fact that the basic premise of patent law was to encourage inventors by setting up a system of incentives.

From a competition law perspective, besides putting hurdles in the form of patent hold-up, abuse of dominant position in the market, royalty stacking,<sup>64</sup> refusal to license, contributing to escalation in costs for the end-users, SEP abuse can have a negative impact on international trade.<sup>65</sup> A hold up would typically be a scenario where a SEP holder, being in a stronger position would state the licensing terms, and the implementer being in the subservient position would have to abide by the terms spelt out by the SEP holder.<sup>66</sup>

A hold up can be manifested in different forms including putting hurdles in the way of investments, innovation or abuse of dominant position, codified in Article 102, Treaty on the Functioning of the European Union (hereinafter referred to as ‘the TFEU’) is exemplified in cases of patent ambush. Typically, patent ambush involves a situation where a patent owner does not reveal that his/her patent has the potential to be an industry standard early on in the process.<sup>67</sup> The abusive conduct lies in the fact that the holder of the patent can extract high royalty rates. The Commission has recognised this unfair

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<sup>62</sup> Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 INNOVATION POLICY AND THE ECONOMY 3 (2000).

<sup>63</sup> Fritz Machlup, *An Economic Study of the Patent System*, Study for Congress (1958). <https://mises.org/sites/default/files/An%20Economic%20Review%20of> (last visited Apr. 27, 2020)

<sup>64</sup> Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS L. REV. 1991-2049 (2007); Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 12 AMER. L. AND ECON. REV. 280 (2010).

<sup>65</sup> Nataliia Kozachuk, *Counteracting SEP Abuse: In Search of a WTO-Consistent Approach*. 53(1) J. OF WORLD TRADE 153-167 (2019).

<sup>66</sup> Lemley & Shapiro, *supra* note 64 at 1991-2049.; Shapiro, *supra* note 64 at 280; Damien Geradin, *Reverse Hold-Ups: The (Often Ignored) Risks Faced by Innovators in Standardized Area*, SSRN ELECTRONIC JOURNAL (2010), <https://dx.doi.org/10.2139/ssrn.1711744>; Alexander Galetovic & Stephen Haber, *The Fallacies of Patent-Holdup Theory*, 13(1) J. OF COMP. L. AND ECON. 1 (2017).

<sup>67</sup> US DEPARTMENT OF JUSTICE AND US PATENT AND TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS (2013), <https://www.justice.gov/sites/default/files/atrl/legacy/2014/09/18/290994.pdf> (last visited April 27, 2020)

behaviour in the Rambus decision.<sup>68</sup>

Further, a hold out or reverse hold up involves the scenario where an SEP holder is in the vulnerable position.<sup>69</sup> Due to the implementers hesitation and unwillingness to reach an agreement, a SEP holder can potentially incur heavy losses. In such situations, the SEP holder would end up offering the SEP at a much lower rate in order to cut losses.<sup>70</sup>

Another pertinent issue is with regard to patent thickets, which are aptly described by Carl Shapiro as, “...an overlapping set of patent rights requiring that those seeking to commercialize new technology obtain licenses from multiple patentees. The patent thicket is especially thorny when combined with the risk of holdup, namely the danger that new products will inadvertently infringe on patents issued after these products were designed.”<sup>71</sup> In the past decade, empirical studies have confirmed that patent thickets escalate costs and impact competition negatively.<sup>72</sup> In the EU as in the US, there is no dearth of cases that have illustrated the abovementioned issues.<sup>73</sup>

## Conclusion

It is apparent that in context of SEPs, the articulation of FRAND terms was a great starting point<sup>74</sup> and has historical roots dating back to 1930s. But it has also become obvious that FRAND for one is not FRAND for all.<sup>75</sup> Even

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<sup>68</sup> WOLFGANG KERBER AND ULRICH SCHWALBE, MU“NCHENER KOMMENTAR, EU-WETTBEWERBSRECHT 556 (2015).

<sup>69</sup> Youping Li & Jie Shuai, *Licensing Essential Patents: The Non-Discriminatory Commitment and Hold-Up*, 67(1) THE JOURNAL OF INDUSTRIAL ECONOMICS 37-55 (2019).

<sup>70</sup> Vincent Angwenyi, *Hold-Up, Hold-out and F/RAND: The Quest for Balance*, 12 J. OF INTELL. PROP. L. AND PRAC. 1012 (2017).

<sup>71</sup> Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 INNOVATION POLICY AND THE ECONOMY 119-150 (2000).

<sup>72</sup> Bronwyn Hall, Christian Helmers, and George von Graevenitz. *Patent thickets and first-time patenting: new evidence*, VOX CENTRE FOR ECONOMIC POLICY RESEARCH’S POLICY PORTAL (Apr. 23, 2016, 09:54 AM), <https://voxeu.org/article/patent-thickets-and-first-time-patenting-new-evidence>.

<sup>73</sup> Torsten Korber, *Abuse of a Dominant Position by Legal Actions of Owners of Standard-Essential Patents: Huawei Technologies Co. Ltd v. ZTE Corp.*, 53 COMMON MARKET L. REV. 1107 (2016).

<sup>74</sup> Jorge L Contreras, *A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust through a Historical Lens*, 80(1) ANTITRUST L. J. 39-120 (2015).

<sup>75</sup> Doris Johnson Hines & Ming Tao- Yang, *Worldwide Activities on Licensing Issues relating to Standard Essential Patents*, WIPO MAGAZINE (Feb. 2019), [https://www.wipo.int/wipo\\_magazine/en/2019/01/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2019/01/article_0003.html)

the understanding of what is fair, reasonable and non-discriminatory varies.<sup>76</sup>

It is important to acknowledge that there are some problems that are subject specific to Patent law and Competition law. However, these problems are intertwined with some common problems that are being confronted globally, in ICT industries. The questions about territoriality and jurisdiction would fall within the scope of the latter.

Specifically, SEPs need to be addressed in context of both competition law as well as IP law. Although the realm of competition law can assist in resolving some issues such as abuse of dominant position, abusive behaviour of some companies which target restricting competition in the industry concerned, there are certain issues that are particular to patent law. For instance, patent infringements and increase in litigation that is related to SEPs is symptomatic of a trend that can only be sorted out within the sphere of Patent law. While there are those that question the validity of having patent laws in the first place and highlight the negative impact on innovation, there are those who believe in the protection of patents. The time honoured belief that patents give the inventor the right to enjoy the fruits of their labour for a limited period of time, is still a largely respected belief. The case of escalation of patent litigation, especially since the SEPs became coveted is not a new revelation. The fact that this is a problem area is also not a new discovery. It has been around for at least two decades. Therefore, one has to be cautious and not throw the baby with the bath water but assess how the situation can be repaired.

The debate also concerns a wider range of issues relating specifically to Information and Communication Technology (ICT) standards. For instances, it encompasses problems of transparency, quality and governance of SEPs.<sup>77</sup> One of the main concerns being lack of transparency pertaining to licensing conditions that results in high transaction costs, market uncertainty and inefficiency. Lack of pertinent information does not allow for the usual process of comparison of products and establishment of prices to take place because of the high level of secrecy in SEPs. Even though SEPs are not interchangeable, their intrinsic ‘essential’ nature can be comparable and comparisons are the common industry practice. The debate concerning FRAND licensing is further complicated by governance of standardization practices. So far, the

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<sup>76</sup> Catharina Maracke, *Free and Open Source Software and FRAND-based patent licenses: How to mediate between Standard Essential Patent and Free and Open Source Software*, 22(3) THE J. OF WORLD INTELL. PROP. 78-102 (2019).

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

SSOs have been spearheading the process. However, with the escalation in the number of SEP holders, implementers and multiplicity of business models, there is increasing dissatisfaction with the contemporary model of governance.

Various attempts<sup>78</sup> are being made to arrive at the most efficient and effective system to deal with the issues concerning SEPs and FRAND licensing. For instance, scholars have attempted to address the question of international jurisdiction over SEPs by employing economic framework<sup>79</sup>, without any encouraging results. There are others who have emphasized the need to adopt a cross-disciplinary approach to standardization, in general, including the issue of SEPs because there are not just innovators, legal experts, but also engineers, managers, economists and software developers that are involved.<sup>80</sup>

A closer look at the FRAND litigation, which entails NPEs as one of the parties, indicates that the legal set up in a country can have a determining impact. Therefore, it is vital to adhere to the Huawei v. ZTE framework in the EU and the E-Bay v. Merck Exchange framework in the US. Further, it is apparent that anti-suit injunctions are employed widely but there is need for caution while exercising anti-suit injunctions since, on the one hand, they can contribute to consistent outcomes of litigation and weed out duplication. But on the other hand, they may set off escalation of costs of litigation.

A more measured and balanced approach is the way forward, especially in the light of the fact that IoT revolution is taking over at an exponential rate. Effectiveness, efficiency and efficacy in terms of investment in innovation can only be ensured when supported by effective legal structures and redress mechanisms. A three tiered approach could assist. First of all, a local approach tied in with a regional agreement, which is guided by a global agreement. Reaching out for an international agreement is inevitable because the questions of jurisdiction will re-surface since technology does not know physical boundaries. As the past decade has shown, cases will surface in the UK, where a US company is involved just as they will make a re-appearance

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<sup>78</sup> Jorge L Contreras, *Global Rate Setting: A Solution for Standards-Essential Patents*, 94 WASH. L. REV. 701 (2019); Gaston Llanes, *Ex-ante Agreements and FRAND Commitments in a Repeated Game of Standard-Setting Organizations*, 54(1) REV. OF INDUSTRIAL ORG. 159-174 (2019).

<sup>79</sup> Nataliia Kozachuk, *Counteracting SEP Abuse: In Search of a WTO-Consistent Approach*. 53(1) JOURNAL OF WORLD TRADE 153-167 (2019).

<sup>80</sup> Olia Kanevskaia, *The Need for Multi-disciplinary Education About Standardization* in SAMUEL O. IDOWU, HENK J. DE VRIES, IVANA MIJATOVIC & DONGGEUN CHOI, SUSTAINABLE DEVELOPMENT. CSR, SUSTAINABILITY, ETHICS & GOVERNANCE (Springer 2020).

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in Germany and France, as has occurred in the past. Therefore, some broader questions of territoriality and jurisdiction also need to be considered.

Are we going to find regional solutions integrated into global deliberations or are we going to continue to attempt local, legally compartmentalised solution to resolve problems with global dimensions? We are at a crossroads and there is a choice to be made.