



The Search for an Optimal Framework for Licensing Standard-Essential Patents: Is Collective Licensing a Solution?

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Abstract The emergence of new technological paradigms, particularly the Internet of Things, has given rise to doubts about whether the current framework for licensing standard-essential patents (SEPs) will be effective in the near future. Consequently, there is a renewed interest in exploring multilateral licensing schemes. One such proposal seeks to establish a public quasi-pool Agency to administer SEP licensing by issuing licences, and collecting and distributing royalties among SEP holders. This article analyses the suitability of the said Agency. It finds that the envisaged Agency could improve SEP licensing by, *inter alia*, alleviating patent holdout and patent holdup, and reducing transactions costs. Weighed against the pursued general interests, i.e. improving SEP licensing and promoting the dissemination of standardised technologies across the EU, we find that licensing SEPs via the envisioned Agency is unlikely to disproportionately interfere with the fundamental rights of patentees.

Keywords SEPs · FRAND · Licensing · Negotiations · Proposal 74 · Fundamental rights

1 Introduction

The Internet of Things (IoT) enables devices to interact with each other via connectivity.¹ The IoT is poised to generate multiple benefits which can significantly improve our industries and personal lives. For example, in the IoT,

¹ Mukhopadhyay and Suryadevara (2014), p. 1.

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smart grids will optimise energy usage² and connected cars will improve traffic efficiency by alerting drivers about dangerous road conditions.³ Lastly, industrial IoT will likely increase productivity for firms while reducing their costs.⁴ As a result, it is estimated that the IoT will generate an annual revenue of approximately USD 127 billion by 2030.⁵

In order to harness the foregoing benefits, seamless connectivity between objects is vital. One of the pillars of such connectivity is cellular standards, ranging from 2G to 5G.⁶ Many of the technologies necessary to conform to standards result from heavy research and development and are, consequently, often protected by patents. In this regard, standard-essential patents (SEPs) are intellectual property rights which protect technologies which implement technical standards.

Since manufacturers of standardised products cannot make compliant products without infringing SEPs, they must obtain licences from SEP owners. Patentees typically agree to license their SEPs on fair, reasonable and non-discriminatory (FRAND) terms. FRAND aims to ensure that, on the one hand, patentees are adequately remunerated, and on the other hand, implementers have access to the patented technology to enable them to implement the standard, subject to paying the appropriate fees. Licensing of connectivity technologies' SEPs has traditionally occurred in the telecommunication sector. Some scholars and policymakers are, however, apprehensive that the IoT may challenge SEP licensing in several ways.

First, cellular standards have conventionally been used in the telecommunication sector. However, in the IoT, cellular standards are already being implemented across diverse sectors, such as health, transport, insurance, finance and manufacturing.⁷ There is a concern that majority of the new entrants in the IoT market will be small and medium enterprises and start-ups which might lack experience in SEP licensing. Furthermore, due to financial constraints, such firms may lack access to technical and legal expertise to advise them on SEP licensing.⁸ Coupled with the burgeoning number of SEP owners and implementers, SEP licensing negotiations in the IoT are likely to be lengthier and more costly.⁹

Second, as already highlighted, the use of cellular connectivity in the IoT cuts across different industries. Each of these heterogeneous uses may have distinct requirements regarding coverage, data rate and latency.¹⁰ Consequently, diverse licensing practices may be necessary to cater for those varied uses.

Third, bifurcated licensing has been the practice in the licensing of SEPs. Bifurcated, as opposed to integrated, licensing is the practice whereby the licensee is different from the recipient of the technical knowledge.¹¹ In the standardisation

² Makris (2022), p. 1

³ Galego and Drexler (2019), p. 137.

⁴ Makris (2022), p. 1

⁵ Statista, Internet of Things (IoT) annual revenue from 2019 to 2030.

⁶ Nikolic (2021), p. 350

⁷ Galego and Drexler (2019), p. 137.

⁸ Nikolic (2021), p. 351; Nikolic and Galli (2020), p. 2.

⁹ Schneider (2020), p. 2.

¹⁰ Galego and Drexler (2019), p. 137

context, the invention protected by the SEP is typically implemented in the upstream market via a component, such as a chipset. The chipset is then integrated into a network device. Finally, the network device is incorporated in a final product, either directly or as part of another intermediate product.¹² Thus, although the upstream entity that manufactures the chipset is the one that implements the technology, SEP owners often opt to license manufacturers of end products.¹³ Bifurcated licensing has been relatively successful because transacting parties are few, large, homogenous and have knowledge of the technology being licensed.¹⁴ By contrast, in the IoT, SEP owners will have to license their technologies to a large number of end-product manufacturers. Given that most of the end-product manufacturers are likely to be small and medium-sized firms with little knowledge of SEP licensing, negotiations are likely to be lengthier and more expensive.

Concerned that the foregoing licensing challenges may impede the dissemination of standardised technologies across the EU, the European Commission (the Commission) has over time undertaken several initiatives to alleviate obstacles which may sub-optimize licensing of SEPs and the emergence and growth of new technological paradigms, such as the IoT. In its 2017 communication, the Commission highlighted the promotion of an efficient environment for FRAND licensing as a priority area for the EU.¹⁵ Thereafter, in 2018, an expert group was established to deliberate upon and assist the Commission in setting a smooth and efficient framework for licensing SEPs. The consultation of the expert group culminated in 79 proposals (the Report) on how FRAND licensing could be improved in the IoT. Notable, though, is that the experts did not reach a consensus on any of the proposals. Rather, individual proposals enjoyed varying degrees of support from different members.¹⁶

In particular, proposal 74 of the Report sought to establish an on-demand collective licensing agency (the Agency), which borrows from the collective licensing scheme in the copyright world, to administer the licensing of SEPs. The envisaged Agency would be a public entity established under EU law, and would be responsible for granting licences for EU SEPs, as well as collecting and distributing revenues to SEP owners. The creation of such an agency, the proposal hopes, would accelerate the establishment of patent pools, alleviate patent holdout, reduce transaction costs, and eventually, improve FRAND licensing in the IoT.

¹¹ Henkel (2022), p. 1.

¹² Henkel (2022), p. 3. An example of how this model of transfer of knowledge trickles down the supply chain is evident in *Cornell v Hewlett-Packard* 609 F. Supp. 2d 279) N.D. N.Y. 2006).

¹³ Henkel (2022), p. 3.

¹⁴ Henkel (2022), p. 3.

¹⁵ European Commission (2017).

¹⁶ 1 star=I do not support at all; 2 star=I am neutral; 4 star=I support; 5 star=I fully support. See annexure 1, p, 18 and pp. 180-186 of the Report. One of the members, Monica Magnusson, entirely abstained from voting on any of the proposals. In her dissenting opinion, she noted the lack of a clear problem statement to steer the work of the group. Furthermore, in her opinion, the proposals were not backed by empirical evidence and were contrary to industry practice, legal and commercial feasibility, and based on methods largely rejected by courts. See Annexure 2 for the detailed dissenting opinion.

Against this background, this article examines the appropriateness or otherwise of the proposed Agency in SEP licensing. The article proceeds in eight parts. Following this introduction, Section 2 highlights the current framework for FRAND licensing, and its shortcomings. Section 3 examines in detail proposal 74, particularly the extent to which the structure and roles of the proposed Agency mirror those of copyright collective management organisations (CMOs). Section 4 analyses whether the licensing scheme under proposal 74 can alleviate patent holdout and patent holdup which are regarded as fundamental problems in FRAND licensing. Section 5 considers the potential interrelationship issues between the Agency, patent pools and national courts. Section 6 analyses whether and the extent to which the proposed licensing scheme impacts the fundamental rights of SEP owners, while Section 7 explores the suitability of designating the European Union Intellectual Property Office as the Agency to perform the roles contemplated under proposal 74. Section 8 concludes.

2 Current Framework for FRAND Licensing Negotiations

Currently, SEP owners can license their patents bilaterally or via licensing platforms, such as patent pools. Bilateral FRAND negotiations in the EU are conducted in line with the framework set by the Court of Justice of the European Union (CJEU) in *Huawei v ZTE*.¹⁷ Where parties fail to reach an agreement, the SEP owner may sue the implementer for infringement before national courts and request for an injunction. When assessing whether to grant an injunction, courts in the EU follow the principles laid down in *Huawei*.

Bilateral negotiations give parties the freedom to tailor licensing terms in a manner that meets their idiosyncratic needs. For example, parties can cross-license each other's patents, pursue joint projects and exchange know-how. However, bilateral negotiations are time consuming and costly. For instance, parties may have to hire individual experts to ascertain the essentiality of the patent(s) in question. This exercise can extend over a long period of time and impose high transaction costs, particularly on small implementers.¹⁸ Thus, some commentators have argued that in the absence of joint licensing schemes, parties in the IoT will have to engage in dozens of redundant bilateral negotiations, hence frustrating FRAND licensing.¹⁹

SEP owners can also license their technologies via patent pools. Patent pools provide several benefits. For instance, they allow implementers to access patents at a one-stop-shop and reduce transaction costs.²⁰ Patent pools also provide certainty to implementers that they are paying licensing fees for only truly essential patents,

¹⁷ *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH*, Case C-170/13. For a detailed exposition of FRAND licensing in the EU and the application and interpretation of the Huawei framework by national courts see <https://caselaw.4ipcouncil.com/>.

¹⁸ Brito and Alvarez (2021), p. 344.

¹⁹ Schneider (2020), p. 3.

since the essentiality of a given patent must be verified by an independent evaluator prior to being admitted to the patent pool.²¹

Despite their advantages, patent pools may be anticompetitive. For instance, they may provide members with a platform to collude, fix prices and exchange confidential information.²² In some cases, however, patent pools have been successful, as is evident from the MPEG LA pool which administered SEPs related to consumer electronics.²³ Patent pools are also gaining some momentum in the IoT market. For instance, Sisvel has already established a multimode licensing programme to aggregate 5G patents for consumer electronics.²⁴ Avanci, another licensing platform, formed the Avanci 5G Vehicle programme for licensing 5G patents in the automotive industry;²⁵ the company has also established Avanci IoT, a one-stop forum for manufacturers and innovators to access IoT related patents.²⁶ However, the uptake of patent pools has generally remained low. This is partly because setting up patent pools is a costly and lengthy process that may require billions of dollars and years to establish.²⁷ Consequently, a small proportion of SEPs are administered via patent pools. For instance, a study by Polhmann and Blind revealed that only 9% of worldwide declared SEPs are licensed via patent pools. Biddle and his co-authors report an even lower figure for laptop computers where only 3% of SEPs are administered by patent pools.²⁸

Nonetheless, given their advantages, the Report noted that patent pools are likely to be the only outfits which may effectively meet the licensing demands of the IoT.²⁹ Hence, proposal 74 sought to establish an on-demand collective Agency to catalyse the formation of patent pools.

3 Proposal 74: Pseudo-CMO Process to Foster Patent Pools

The Agency envisaged under proposal 74 has three salient goals, namely, curbing patent holdout, reducing transaction costs and accelerating formation of patent pools. The proposal recommends that rules should be put in place to stipulate timelines within which SEP owners should form patent pools or license their patents voluntarily. If SEP owners fail to do so at the expiry of the specified period, a public Agency should be created “to act like a patent pool on behalf of *all* SEP holders.”³⁰

²⁰ Guidelines on the Application of Article 101 of the Treaty of the Functioning of the European Union to technology transfer agreements (Technology Transfer Guidelines) para. 244

²¹ Brito and Alvarez (2022), p. 44.

²² Technology Transfer Guidelines, para. 246

²³ Seigel et al. (2019).

²⁴ <https://www.sisvel.com/licensing-programmes/mobile-communications/5g-multimode/>.

²⁵ <https://www.avanci.com/vehicle/5gvehicle/>.

²⁶ <https://www.avanci.com/iot/>.

²⁷ Contreras (2013), p. 76.

²⁸ Contreras (2013), p. 76.

²⁹ Report, p. 157.

Once the Agency has been established, it would perform the following functions which mirror those of CMOs.

3.1 Issuing Licences

One of the key roles of the Agency would be to issue SEP licences to implementers. According to the Report, the Agency would act as a legal representative of SEP owners and have authority to grant licences in respect to all EU SEPs for a given standard.³¹ However, the Agency would not oust the right of SEP owners to license their patents on a bilateral and voluntary basis.³²

The proposal envisions that the Agency would be similar to the mandatory CMOs established under Directive 1993/83/EC on the coordination of certain rules concerning copyright and rights related to copyright applicable to broadcasting and cable transmission (the Satellite and Cable Directive). The Satellite and Cable Directive aims to facilitate the free movement of satellite and cable transmission services within the EU. Regarding cable retransmission rights, the Directive establishes a mandatory collective management scheme. Under that scheme, rightholders cannot exercise their retransmission rights individually. Rather, those rights can only be exercised through a collecting society.³³ To this end, the Agency contemplated under proposal 74 differs from the CMO model established under the Satellite and Cable Directive to the extent that SEP owners retain the prerogative to grant licences bilaterally and voluntarily; the right to issue licences does not entirely shift to the Agency.

It is noteworthy that the Agency would have the power to issue licences for all EU SEPs only upon the request of an implementer.³⁴ An implementer may request for a licence in two instances. First, on a voluntary basis. Second, an implementer may seek a licence to avoid an injunction, provided the implementer agrees to take a licence, not just for the litigated SEPs, but for all EU SEPs that are relevant to a particular standard. Furthermore, the circumstances under which an implementer can request for a determination of the payable royalty rate and challenge the patentee's request for an injunction under proposal 74 differs from current practice. Presently, an implementer who faces the threat of an injunction may request the court to determine the licensing terms of the litigated SEP(s). Under proposal 74, the implementer would not request the court to determine the appropriate licensing terms for the litigated SEPs. Rather, the implementer would request the Agency to grant it a licence in respect to all EU SEPs.³⁵ The effect of this requirement is that national courts would not have determine the question of an injunction, since the potential injunction would be substituted with payment of royalties for all the EU SEPs in question. This approach, the proposal hopes, would eliminate patent

³⁰ Report, pp. 166–167.

³¹ Report p. 166.

³² Report p. 166.

³³ Article 9(1) of the Satellite and Cable Directive.

³⁴ Report p. 167

³⁵ Report p. 167.

holdout. We analyse this aspect in detail in Section 4. Lastly, by granting a licence for all EU SEPs, the Agency would make SEP licences available at a one-stop-shop, thereby eliminating the need for parties to engage in numerous bilateral negotiations. Indeed, the ability to aggregate and offer licences for SEPs and copyrights is one of the ways through which patent pools and CMOs ease the licensing of intellectual property.

3.2 Setting Royalty Rates

Since an implementer's request for a licence under proposal 74 would concern all EU SEPs for a particular standard, the payable royalty would be the aggregate rate of all those SEPs.³⁶ According to the Report, the aggregate royalty rate would be set in accordance with proposal 42 of the same Report.

The replication of proposal 42 into the licensing scheme under proposal 74 calls for analysis.

Proposal 42 provides that the reasonable aggregate royalty rate should be determined as soon as implementers start using a certain SEP.³⁷ In particular, an entity, such as a standard development organisation (the private consortia under whose aegis standards are established) or any other specially established body, would be responsible for facilitating the process of setting the royalty rate.³⁸ The entity would invite SEP owners to participate in a consultative process to set the appropriate royalty rate in line with methods, such as relying on public statements of SEP owners, comparable licences, or apportioning the value addition created by the SEP.³⁹ The appropriate rate would be determined by the qualified majority votes of SEP owners. Consequently, implementers would be invited to discuss the proposed rate. If parties reach an agreement, the adopted rate would be published.⁴⁰

Proposal 42 is progressive in several ways. By requiring that the aggregate royalty rate be set before implementers commence using the patent, implementers would be better placed to plan their finances beforehand. As Peters and his co-authors explain, the current practice of setting royalty rates after the implementer has practiced the SEP extensively has potential to impose heavy financial burden on implementers since they cannot anticipate the rates which the SEP owner will likely charge and factor the same in their business plans.⁴¹ At the same time, this approach could derail the adoption of standardised products, since implementers would have to await the setting of appropriate licensing fee before they can commence practising the patent. This process can extend over a long time, especially given the numerous parties involved in the negotiations.

Secondly, proposal 42 is still sound as it encourages that licensing terms be set through a mutual and voluntary process, rather than abandoning such a critical

³⁶ Report, p. 167.

³⁷ Report, p. 106.

³⁸ Report, p. 105.

³⁹ Report, p. 106.

⁴⁰ Report, p. 106.

⁴¹ Peters et al. (2024a, b), p. 180.

aspect to an external entity, as is the case with the state-driven, supervisory or unilateral approaches of setting licensing terms in the copyright context.⁴² By participating in the rate setting process, one could reasonably expect the implementers to accept the agreed licensing fees rather than resorting to litigation. However, there is a risk that the consultative process between SEP owners themselves, or between SEP owners and implementers, might stretch over a long period of time, thereby delaying the licensing process. In order to avert this risk without entirely watering down SEP owners' right to exercise control over the patents, the Agency could set definite timelines within which parties should deliberate and agree upon and submit the FRAND rate and aggregate royalty rate for publication. Furthermore, where necessary, the Agency could appoint expert conciliators to suggest non-binding aggregate rates for the patents in question and assist parties to reach an agreement.

3.3 Distribution of Royalties

Another role that the Agency shares with CMOs is distribution of royalties. According to the proposal, once the aggregate rate has been set in line with proposal 42, the Agency would collect and distribute revenue among SEP owners. The revenue would be distributed on a regular basis and would commence immediately after the SEP owners have established a patent pool (in which case the Agency would cease its operations) or in the case of litigation, once the SEP owner has won its lawsuit.⁴³

However, the proposal neither specifies the intervals nor the manner in which the distribution would be conducted. For instance, it is silent about how the revenues should be apportioned among the SEP owners. However, a lesson could be borrowed from patent pools. The manner in which royalties are shared in a patent pool depends on the decision of the patentees. Some pools distribute royalties following a points-based systems such that the higher the number of points a patentee garners, the higher its revenues; other pools adopt a qualitative approach so that revenues are awarded based on factors such as the value of the technical contribution of the patent or the level of research and development expended in respect to the patent.⁴⁴ The Agency could adopt similar mechanisms to determine the mode of distribution.

It is, however, doubtful that SEP owners, would receive royalties faster, as propounded in the proposal, since the distribution of royalties would commence once the SEP owners agree to form a patent pool or at conclusion of litigation. Given that both these processes could take years to conclude, it appears that apart from the threat that the Agency, rather than the SEP owners, would grant licences, it is not clear how proposal 74 would ensure that SEP owners recoup their investments in a timely manner. It is, therefore, important that the Agency, in consultation with

⁴² Kim (2017), p. 142.

⁴³ Report, p. 167.

⁴⁴ Brito and Alvarez (2022), pp. 39–40.

the SEP owners, set definite timelines within which to distribute revenues in order to guard incentives for innovation.

4 Proposal 74, Patent Holdout and Patent Holdup

One of the principal reasons for establishing the Agency is to address patent holdout. This section argues that proposal 74 can alleviate both patent holdup and patent holdout, more particularly in respect to the question of injunction which is said to facilitate both of these licensing defects. Patent holdout theory avers that an implementer can refuse to engage in good faith negotiations with the SEP owner, thereby forcing the SEP owner to sue in order to earn its royalties, or earn no royalties at all since the licensing game is no longer worth the chase.⁴⁵ Patent holdout is viewed as a fundamental problem in FRAND licensing, and it has been argued that it is likely to exacerbate in the IoT, given the projected exponential increase of small scale implementers in the downstream markets.⁴⁶

The total lack of or limited availability of injunction is cited as the main factor that incentives implementers to engage in patent holdout.⁴⁷ As a class of entitlements which are protected by property rules, patents can only retain their essence if the patentee can enjoin third parties from using the patent without the patentee's permission.⁴⁸ In order for an SEP owner to be granted an injunction in the EU, it must demonstrate that it has adhered to the *Huawei* negotiation framework. However, the *Huawei* framework, the Report argues, has two shortcomings which may facilitate patent holdout.

First, under the *Huawei* framework, if found liable for infringement, the implementer is required to pay damages in respect of the litigated patents only. The prospect of paying damages for the suit patents only, the Report posits, may encourage patent holdout possibly due to the low risks that the infringing implementer faces. Moreover, the implementer is not required to demonstrate its willingness to pay royalties in respect to other SEPs for a given standard other than those subject of litigation.⁴⁹

In order to disincentivise implementers from engaging in the foregoing patent holdout strategies, proposal 74 recommends that an implementer who wishes to avoid an injunction should take a licence for all EU SEPs for the relevant standard, not just the litigated patents.⁵⁰ This condition could reasonably discourage patent holdout, since the implementer would have to pay the aggregate royalty rate for all EU SEPs. The immense financial burden and the threat of being unable to implement other patents in the standard could deter implementers from initiating or overstressing litigation as a patent holdout strategy.

⁴⁵ Epstein and Noroozi (2017), p. 1384.

⁴⁶ Peters et al. (2024a, b), p. 156.

⁴⁷ Heiden and Petit (2018), p. 232. Epstein and Noroozi (2017), p. 1384.

⁴⁸ Barnett (2017), p. 1317.

⁴⁹ Report p. 166–168

⁵⁰ Report p. 167.

Further, it is to be recalled that proposal 74 forecloses the implementer from requesting the court to determine the payable royalty rates. Instead, if the SEP owner seeks an injunction, the implementer can request the Agency to issue it with a licence for all EU SEPs for the relevant standard, and pay royalties for all those patents, whether litigated or not. In essence, parties forego what would be otherwise a windy litigious process, and instead the implementer pays the appropriate royalty rates at the earliest. One could reasonably expect this approach to eliminate patent holdout, as follows. Similarly situated implementers are keen to operate on a level playing field and would be more willing to take a licence if their competitors are willing to do so.⁵¹ An implementer is likely to hold out for as long as possible, including by litigating for years and before various forums, if only not to be the first one to take a licence on unfavourable terms.⁵² The intuition is fairly straightforward. Suppose the SEP owner chooses to sue and is awarded truly FRAND royalties, this award can only be made several years down the line. Meanwhile, the SEP owner needs to recoup its initial research and development costs and continue innovating. The reality, or the risk, of receiving compensation so late in the day may constrain the SEP owner to accept sub-FRAND terms. Dasgupta and Teece poignantly express this scenario: "... if the implementer can threaten to deny the SEP holder's fair slice of the pie until the pie has gone cold, the SEP holder might be better off accepting a smaller slice of the pie now."⁵³

The scheme under proposal 74 can eliminate this holdout strategy in three ways. First, parties would not have to engage in a full-blown litigation before the court can determine the amount of royalties which the infringing implementer should pay. Assuming that the royalties have already been determined in line with proposal 42, the Agency would only require the implementer to pay that amount and be granted a licence; otherwise the patentee would still be at liberty to litigate against an unwilling licensee. Secondly, assuming that the rates which were already set under proposal 42 are FRAND, the implementer would be facing the burden of paying a colossal amount at a go, not just the rates for the litigated patents, as is presently the case. Lastly, it is noteworthy that implementers can employ a number of pre-litigation strategies to engage in patent holdout. For instance, upon being notified of infringement, an implementer may choose to ignore correspondences, unreasonably postpone negotiations, or make unreasonably low counteroffers. Licensing SEPs via the Agency could foreclose these strategies since parties would not have to engage in pre-litigation negotiations which may provide the implementer with an avenue to delay negotiations or ignore correspondences; the implementer simply has to pay the set aggregate FRAND rate. From the foregoing, licensing SEPs via the proposal 74 Agency could alleviate patent holdout.

The patent holdup theory, on the other hand, avers that once a patent is adopted into a standard, an implementer incurs sunk in costs in designing its product in line with the SEP. Consequently, the implementer is locked in the technology – it can neither make compliant products without infringing the patent nor transfer the costs

⁵¹ Peters et al. (2024a, b), p. 156.

⁵² Heiden and Rappaport (2023).

⁵³ Dasgupta and Teece (2023), p. 12.

to other non-infringing activities.⁵⁴ The patent owner, armed with an injunction, or threat of an injunction, may act opportunistically to extract a fee that does not reflect the technology's economic value.⁵⁵ Once the implementer is enjoined, it can only continue manufacturing or selling its products after redesigning them. However, as Lemley points out, this exercise may take years and cost billions of dollars. In response, the implementer may choose to settle the suit and pay the patentee a higher amount than the patentee would have been awarded had the suit been heard and concluded in favour of the SEP owner.⁵⁶ Licensing SEPs via the Agency could alleviate this problem since the prospective injunctive relief is substituted with a request by the implementer to simply pay aggregate royalties for all EU SEPs which are truly FRAND in exchange for a licence. Thus, the SEP owner can no longer leverage the threat of injunction to extract excessive licensing fees. As we explain in the succeeding section, substituting an injunction with payment of FRAND rates is unlikely to disproportionately interfere with the SEP owner's fundamental human rights because this is a bargain that the SEP owner accepts: the patentee agrees to limit its exclusivity by making its SEPs available to third parties for licensing in exchange for being paid FRAND rates.

5 Interrelationship Between the Agency, Patent Pools and National Courts

The Agency envisioned under proposal 74 would licence all EU SEPs only if SEP owners fail to form a patent pool for a standard within a specific period of time. However, proposal 74 does not articulate whether the existence of the Agency would automatically foreclose the creation of other patent pools to administer patents on the standard in question, given that the Agency would have the power to grant a licence in respect to all EU SEPs. The proposal only states that the SEP owners would be at liberty to license their patents bilaterally and voluntarily.

If this be the intent of proposal 74, it would be problematic from several fronts. First, it would eliminate alternative platforms through which SEP owners and implementers could transact, particularly if the licensing terms set by under proposal 42 are unfavourable to either party. Secondly, such a scheme would be nothing short of a mandatory or quasi-mandatory licensing scheme that departs from the current framework whereby different patent pools can administer patents on a certain standard.⁵⁷ As scholars, such as Baron have noted, voluntary participation is one of the important underpinnings for the success of patent pools. In the event that the patent pool does not offer licensing terms which are fair and favourable to all the participants, parties may decline to join the patent pool.⁵⁸ Furthermore, there is no empirical evidence that licensing SEPs through platforms such as patent pools is more efficient vis-à-vis bilateral licensing.⁵⁹ Thus, requiring that SEPs be

⁵⁴ Lemley (2007), pp. 150–154.

⁵⁵ Cotter et al. (2019), p. 1507.

⁵⁶ Lemley (2007), pp. 150–154.

⁵⁷ Baron (2020), p. 4

⁵⁸ Baron (2020), p. 5

exclusively licensed through the Agency would not guarantee efficiency, let alone the willing participation of industry players. Lastly, imposing an exclusive licensing mandate on the Agency would require that strong institutional measures are put in place to ensure that such an entity does not behave anti-competitively.⁶⁰ To avert these risks, it is advisable that the Agency, if established, operates alongside other licensing platforms, such as patent pools.

The other interrelationship concern is that between the Agency and national courts. Proposal 74 suggests that when the SEP owner sues for an injunction, the implementer may request the Agency to grant it a licence for all EU SEPs in order to escape an injunction. The implementer would then pay the appropriate royalties for all those patents. *Prima facie*, national courts would have to down their tools and not adjudicate the infringement suit, since the implementer simply has to pay the appropriate royalty rates. As we explain in the succeeding section, this requirement does not conflict with an SEP owner's fundamental rights since, unlike other patentees who may refuse to licence their patents, SEP owners unequivocally undertake to make available their patents to third parties, provided the implementer pays the FRAND rates; otherwise, the SEP owner is at liberty to sue an unwilling licensee.

6 Intellectual Property and Fundamental Rights in the EU

In recent years, IP in Europe has undergone a process that scholars term as “constitutionalisation”, whereby fundamental rights articulated in EU constitutional instruments influence the construction of IP laws.⁶¹ The European Convention on Human Rights (the Convention) of 1953 is regarded as the first enforceable legal instrument that accorded European IP constitutional protection. In particular, Art. 1 Protocol 1 of the Convention guarantees every natural or legal person the right to peaceful enjoyment of their possession. A person can only be deprived of their possession when public interest so requires, subject to the conditions provided in law and general principles of international law. The Protocol further provides that the provisions articulated therein shall not “impair the right of a state to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contribution or penalties.”

Although Art. 1 Protocol 1 might appear as providing conclusive protection to possessions, including IP, it has been criticised. For example, Geiger has argued that Art. 1 Protocol 1 does not provide sufficient protection to IP from a fundamental rights perspective. First, Art. 1 Protocol 1 does not expressly mention IP, hence attempts by the European Court of Human Rights (ECtHR) to protect IP via the said Article is faulty. Secondly, Geiger contends that Art. 1 is concerned with general property; it neither takes into account the idiosyncrasies and multidimensional characteristics of intangible property, such as IP, nor does it emphasise the social

⁵⁹ Baron (2020), p. 4.

⁶⁰ Baron (2020), p. 5.

⁶¹ Geiger (2022); Griffiths (2013).

function of IP.⁶² However, as we explain in detail below, despite these ambiguities, the ECtHR's interpretation of Art. 1 Protocol 1 provides a sound understanding about the scope of protection accorded to IP under the Convention, and how interferences with IP in the EU should be treated.

The constitutional protection of IP in the EU is further buttressed by the European Charter of Fundamental Rights (the Charter). Art. 17 (2) of the Charter provides that "Intellectual property shall be protected." Although this provision would appear to be offering an unequivocal protection to IP, similar to Art. 1 Protocol 1 of the Convention, it has been criticised for vagueness. Pertinently, some scholars contend that since the intent and effect of Art. 17(2) is unclear, it provides an ineffective protection to IP.⁶³

Griffiths and McDonagh postulate that one possible interpretation of Art. 17(2) is that it proclaims that IP is protected within the EU in order to advance the fundamental norms established in the Charter.⁶⁴ However, the authors are hesitant that the Charter could not have intended to make such a pure and factual protection of IP.⁶⁵ Another potential interpretation of Art. 17(2) is that it requires EU bodies and national authorities to provide the highest level of protection to IP. Yet, such interpretation is unlikely because protection of IP is not absolute⁶⁶ – the rights of IP owners should be balanced against competing interest, such as public interest and other fundamental rights, e.g. the freedom of expression.

A reasonable interpretation of the scope and intent of Art. 17(2) is that propagated by Geiger. Geiger argues that Art. 17(2) affirms that IP is a form of property protected under the general property clause in Art. 17(1) of the Charter. This interpretation is in consonance with judicial decisions, such as *Smith Kline and French Laboratories Limited v The Netherlands*,⁶⁷ where it was held that IP is a type of property that is covered by the right to peaceful enjoyment of possession. Art. 17(1) is, therefore, critical in providing an understanding of the scope of protection offered to IP under Art. 17(2). Art. 17(1) provides as follows:

Everyone has the right to own, use, dispose of and bequeath his or her lawfully acquired possessions. No one may be deprived of his or her possessions, except in the public interest and in the cases and under the conditions provided for by law, subject to fair compensation being paid in good time for their loss. The use of property may be regulated in law in so far as is necessary for the general interest.

Article 17(1) contemplates two interferences with IP, namely control of use and deprivation of property. Does the collective licensing of SEPs by the Agency contemplated under proposal 74 amount to either form of interferences?

⁶² Geiger (2022), p. 4

⁶³ Geiger (2022), p. 4.

⁶⁴ Griffiths and McDonagh (2013), p. 4.

⁶⁵ Griffiths and McDonagh (2013), p. 4.

⁶⁶ Husovec (2019), p. 855.

⁶⁷ *Smith Kline and French Laboratories Ltd v The Netherlands* (1990) 66 DR 70, 79 (European Commission of Human Rights).

6.1 Proposal 74 and Fundamental Rights in the EU

6.1.1 Possession

The protection accorded under Art. 1 Protocol 1 of the Convention and Art. 17(1) and (2) of the Charter applies to possessions. The concept of possession has been interpreted as consisting of existing rather than future possessions.⁶⁸ In the case of *Anheuser-Busch Inc v Portugal*,⁶⁹ the ECtHR held that registered trademarks are protected by Art. 1 Protocol 1. However, based on the facts in *Anheuser-Busch*, a majority of the court found that no possession had been breached since the trademark of the applicant (an American brewer) was opposed by a Czech beer distributor whose products enjoyed protection as a registered geographical indication.⁷⁰

Consequently, the protection accorded under Art. 1 Protocol 1 of the Convention and Art. 17(2) of the Charter would definitely apply to patents which have already been granted by the patent office which the Agency established under proposal 74 seeks to administer. However, SEPs also include pending patent applications which have been declared to the SDO and could read on the standard. In *Anheuser-Busch*, pending trademarks were not deemed as constituting possessions. One could reasonably argue that pending patent applications which are yet to be granted, though declared to an SDO, could be accorded similar treatment and not be regarded as possessions within the meaning of the Convention and the Charter.

6.1.2 Deprivation of Property

Both the ECtHR and the CJEU have interpreted what constitutes deprivation of property, albeit they cite different circumstances that amount to this form of interference. According to the ECtHR, deprivation of property would occur where there is a formal transfer of ownership of property to a public entity or a private person.⁷¹ A *de facto* deprivation might also occur where, although the owner retains possession of his property, the said property “is emptied of its content.”⁷²

On the other hand, the CJEU’s interpretation of what would constitute deprivation of property is evident from the *Volvo*⁷³ case where the court stated as follows:

[t]he right of a proprietor of a protected design to prevent third parties from manufacturing and selling or importing, without his consent, products incorporating the design constitutes the very subject-matter of his exclusivity right. It follows that an obligation imposed on the proprietor of the protected

⁶⁸ Griffiths and McDonagh (2013), p. 11.

⁶⁹ *Anheuser-Busch Inc v Portugal* (2007) 45 EHHR.

⁷⁰ *Anheuser-Busch Inc v Portugal* (2007) 45 EHHR, paras. 50–52.

⁷¹ *The Former King of Greece and Others v. Greece* (2001) 33 EHRR 21.

⁷² Husovec (2019), p. 851. See, for example, *Papamichalopoulos v Greece* (1993) 16 EHRR 440.

⁷³ *Volvo*, Case C-238/87.

design to grant third parties, even in return for a reasonable royalty, a licence for the supply of products incorporating the design would lead the proprietor thereof being deprived of the substance of his exclusive right, and that a refusal to grant such a licence cannot in itself constitute an abuse of dominant position.⁷⁴

In essence, the cornerstone of any IP, according to the CJEU, lies in the right of the IP owner to exclude third parties from using the IP without prior consent. Once this right is derogated, the IP owner may be deemed to have been deprived of the substance of his exclusive rights, and consequently, his property. This strand of reasoning in *Volvo* was expressed by the CJEU in *Huawei* in the following terms:

[the] need for a high level of protection for intellectual property rights means that, in principle, the proprietor may not be deprived of the right to have recourse to legal proceedings to ensure effective enforcement of his exclusive rights, and that, in principle, the user of those rights, if he is not the proprietor, is required to obtain a licence prior to any use.⁷⁵

Proposal 74 provides that the Agency would act as the legal representative of SEP owners, and grant licences in respect to all EU SEPs relevant to a particular standard, not just the litigated patents. The Agency would perform these roles only if SEP owners do not form a patent pool within a specific period of time. Consequently, it would appear that, in line with the ECtHR jurisprudence, since there is no formal transfer of the SEP to another party, save mandating the Agency to licence the patents on behalf of the patentee, the patentee is not deprived of its property, since it maintains ownership of the patent. A similar logic may be deduced in the case of patent pools: patent pools cannot be said to deprive the SEP owners of their property by the mere fact that patent pools aggregate those patents and make them available to pool members. The SEP owners can still licence their patents bilaterally or via other pools. Thus, in consonance with the decisions of the ECtHR such as *Papamichalopoulos v Greece*⁷⁶ one would be hesitant to regard licensing SEPs via the proposal 74 Agency as depriving SEP owners of their property under Art. 1 Protocol 1 of the Convention.

On the other hand, as already highlighted, according to the jurisprudence of the CJEU, a patentee may be deemed to have been deprived of their property if their exclusive rights are interfered with. Proposal 74 provides that if the SEP owner seeks an injunction against the implementer, the latter can request for a licence in respect to all EU SEPs for the relevant standard, subject to paying the aggregate royalty rate. Does substituting an injunction with licensing fee deprive the SEP owner of its property rights in line with the jurisprudence of the CJEU? This question was partly dealt with in *Huawei*.

In *Huawei*, the CJEU held that given that SEPs are essential to a given standard, the patentee might be motivated to leverage the essentiality of the patent to exclude

⁷⁴ *Volvo*, Case C-238/87, paras. 8–9.

⁷⁵ *Huawei v ZTE*, Case C-170/13.

⁷⁶ *Papamichalopoulos v Greece* (1993) 16 EHRR 440.

third parties from using the patent, thereby reserving the market to itself.⁷⁷ In order to avert this risk, the SEP owner commits to make the patent available to third parties in exchange for being paid a FRAND royalty rate. The FRAND commitment, the CJEU affirmed, is a fundamental aspect that distinguishes SEPs from other patents. Consequently, the court held that the refusal by the SEP owner to grant an implementer a licence on FRAND terms may constitute abuse of dominant position contrary to Art. 102 of the Treaty on the Functioning of the European Union (TFEU).⁷⁸ At the same time, the CJEU was also emphatic that intellectual property rights enjoy a high level of protection. Consequently, similar to other proprietors whose patents are not FRAND-encumbered, the SEP owner may not be deprived of its right to commence legal proceedings in order to protect their property, as this would violate the fundamental rights guaranteed to the patentee under the Charter.⁷⁹ However, in order to ensure that the SEP owner does not act afoul Art. 102 of the TFEU, the patentee should, prior to seeking an injunction, comply with steps set out in *Huawei*, such as notifying the implementer that it is infringing the patents, describing the nature of infringement, expressing the patentees willingness to licence the SEP on FRAND terms, etc.⁸⁰

Applying the reasoning of the *Huawei* court, it appears that the licensing scheme under proposal 74 does not deprive SEP owners of their property. Unlike other patentees, SEP owners enter into the following voluntary bargain: the SEP owner cannot refuse to licence their patents to an implementer provided the latter is willing to pay FRAND rates.⁸¹ Assume that the SEP owner notifies or sues the implementer for infringement in line that the *Huawei* procedure and that the appropriate FRAND rates have already been set pursuant to proposal 42 or any other scheme for determining FRAND rate, if the implementer is willing to pay the FRAND fee for all the relevant EU SEPs, a refusal by the SEP owner to licence such an implementer, and the resulting infringement suit, could constitute an abuse of dominance, per the CJEU's jurisprudence. On the other hand, where the implementer is unwilling to pay the appropriate rate, the SEP owner should rightfully sue for infringement, subject to following the steps enunciated by the *Huawei* decision. In essence, to the extent that proposal 74 substitutes the injunction question with one for payment of FRAND licensing fees, it should not be understood as totally depriving the SEP owner from suing for injunction. However, in the event that such a suit is brought and the implementer expresses its willingness to take a licence for all relevant EU SEP, the Agency should grant such as licence. In sum, substituting an injunction with payment of FRAND rates does not deprive the SEP owner of its property, since the SEP owner limits its right to enforce its exclusivity *via* an injunction (in line with the *Huawei* procedure) against a willing licensee in exchange for FRAND rates, and consequently, the benefit of having its patent adopted across the industry that implements the standard.

⁷⁷ *Huawei*, para. 52.

⁷⁸ *Huawei*, para. 53.

⁷⁹ *Huawei*, paras. 58–59.

⁸⁰ *Huawei*, paras. 61–69.

⁸¹ I thank the peer reviewers for bringing this point to my attention.

6.1.3 Control of Use, and the Right to Peaceful Enjoyment

Article 17 (1) of the Charter provides that although everyone has the right to use their lawfully acquired possessions, such use may be regulated by law as far as necessary for the general interest. Control of use of property could occur where, for instance, the State puts in place planning restrictions in place, exercises its rent control powers or power of taxation.⁸² An interference with the right to control use of property could also arise where the EU or a national entity abolishes or curtails the scope of an IP.⁸³

The right to control the use of property has been interpreted as according States a wide margin to regulate property. Notably, Geiger argues that while fundamental rights in respect to property under Art.1 Protocol 1 of the Convention contemplates that the IP owner should be able to derive some economic value from his creation, the Protocol does not require that the value of the property be realised solely by excluding third parties. Legal remuneration, e.g. licensing fee, may, in some circumstances, be more favourable to the rightholder.⁸⁴

This article argues that proposal 74 should not be deemed as amounting to an interference with the right to control the use of SEP owners for several reason. As already highlighted, the SEP owner would still be at liberty to licence its SEP bilaterally outside the Agency. Secondly, the SEP owner would retain the right to institute infringement proceedings against unwilling licensees. Moreover, by alleviating patent holdup and patent holdout and reducing transaction costs as illustrated in the previous sections, licensing SEPs via the Agency would achieve a legitimate aim – i.e. inculcating an efficient licensing framework for the benefit of SEP owners, implementers and final consumers, and promoting the dissemination of standardised technologies across the EU.

On the other hand, the right to peaceful enjoyment under Art.1 Protocol 1 of the Convention may be deemed to have been breached where a Member State does not interfere with the property through deprivation or control of use, but the property owner is nonetheless unable to enjoy his property.⁸⁵ The case of *Sporrong and Lönnroth v Sweden*⁸⁶ is illustrative. In that case, the State issued expropriation permits in respect to some private properties in central Stockholm. The court held that since the owners were still at liberty to sell or dispose of their properties, they had not been deprived of their properties. However, the court found that the property owners' right to peaceful enjoyment had nonetheless been interfered with.⁸⁷

One could argue that proposal 74 does not interfere with the SEP owner's right to peaceful enjoyment. Although the Agency would be mandated to issue licences in respect of all EU SEPs without seeking the patentee's prior consent, this is a

⁸² Griffith and McDonagh (2013), p. 12.

⁸³ Griffith and McDonagh (2013), p. 12.

⁸⁴ Geiger (2006), p. 405.

⁸⁵ Griffith and McDonagh (2013), p. 7.

⁸⁶ *Sporrong and Lönnroth v Sweden* (1982) 5 EHRR 85.

“burden” that SEP owners accept: in exchange for their patents being adopted into the standard and implementers paying FRAND rates, SEP owners guarantee third parties’ access to the patent. Whether the licence is granted by the patentees bilaterally, or via a platform such as the Agency or a patent pool is immaterial, since refusal to licence an implementer who is willing to pay FRAND rates would amount to abuse of dominance, as was held in the *Huawei* case.

6.2 Proposal 74 and Proportionality

Proportionality is a critical constitutional principle that EU courts apply to test the legality of a certain action whereby a legitimate goal is being pursued but another interest risks being damaged.⁸⁸ The proportionality test is relevant in assessing whether the interference with an IP – whether in the form of deprivation or limited control of use or peaceful enjoyment – is justified.

In applying the proportionality test, courts typically follow three steps. First, the court must ascertain that the action is appropriate for achieving a legitimate aim; secondly, the action must not exceed what is necessary to achieve the pursued legitimate aim, and third, interfering with the protected right should be justified in light of the aim that is being pursued.⁸⁹ The third step – balancing – may take two forms. First is interest balancing whereby the respective rights or interests are “measured” and their weights “compared.” Balancing by reasoning – the second type of balancing that is mostly used by the courts – involves “making a moral argument as to which of the competing interest takes priority in the case at hand.”⁹⁰

Therefore, what constitutes competing interests, as articulated under the balancing exercise, is critical in conducting the proportionality test. In our context, the interests which ought to be balanced are the rights of the IP owner, on one hand, and the goals which proposal 74 aims to achieve, namely, promoting a smoother framework for FRAND licensing, and the dissemination of standardised technology in the internal market, on the other hand. The exact interests of IP owners which should be taken into account in the proportionality test may be difficult to assess given the diverse social goals that different IP seeks to achieve, and the distinct rationales that underlie those IP. For instance, whereas both patents and copyrights are said to provide economic incentives for creativity and innovation, copyrights tend to be more concerned with protecting moral rights (more so in the EU) compared to patents. Trademarks also perform a stronger market transparency role vis-à-vis trade secrets. Thus, some scholars have argued that the term “IP” is a

⁸⁷ Griffiths and McDonagh 2013, p. 7.

⁸⁸ Sauter (2022), p. 439; Kosta (2019), p. 1.

⁸⁹ Kosta (2019), p. 2.

⁹⁰ Kosta (2019), p. 2, citing Möller K, Proportionality: Challenging its Critics (OUP 2002). The court in *The Queen v Minister of Agriculture, Fisheries and Food and Secretary for State for Health ex parte Fedesa et al* Case C-331/88 laid down a four-step test which includes assessing whether the measure is suitable, pursuing a legitimate aim, the least restrictive, and is not manifestly disproportionate in light of the expected costs and benefits. However, Sauter notes that notes that all these steps are followed, and the last steps can be subsumed in each other. See Sauter (2022), p. 448.

misnomer since it bundles up different informational properties which perform distinct social goals.⁹¹

The interest of patentees which should be taken into account under the proportionality test may be deduced from the Attorney General's opinion in *Huawei*, thus:

[t]he essential objective of a patent is to ensure, in order to reward the creative effort of the inventor, the owner of the patent has the exclusive rights to use an invention with a view to manufacturing industrial products and selling them, either directly, or by granting licences to third parties, as well as the right to oppose infringements.⁹²

The first step in the proportionality test is identifying the competing interests to be balanced. The main aim of proposal 74 is smoothening FRAND licensing in the EU by, *inter alia*, accelerating the formation of patent pools, combating patent holdout and patent holdup and reducing transaction costs. These aims are legitimate when applied against the first prong of the proportionality test, which requires that the action in question pursue a legitimate aim. On the other hand, the rights of the SEP owners which should be balanced against the said aims is the right to exclude third parties from using the property without the SEP owners' consent, and consequently, ensuring that SEP owners receive fair compensation for their technologies. The second step in the proportionality test requires that the action in question should not be excessive in light of the pursued aim. As already highlighted, the licensing scheme under proposal 74 does not interfere with the patentee's remuneration: the SEP owner is not only at liberty to licence its patents independently, but the implementer is still required to pay FRAND rates as it would were it to be licensed bilaterally or via a patent pool. Moreover, exclusivity is not the only pathway for the SEP owner to realise the value of the patent; legal remuneration may still be sufficient for the patentee. This accession is even more heightened in respect of SEPs: the SEP owner agrees to licence third parties, provided the latter pay FRAND rates. It is also worth noting that Member States enjoy a wide margin of discretion in so far as the regulation of property is concerned, and this discretion is likely to be viewed more favourably where the interference pertains to use rather than total deprivation.⁹³ The ECtHR has held that interference, including one amounting to deprivation of property, is likely to be in tandem with Art. 1 Protocol 1 of the Charter if the property owner is compensated.⁹⁴

Proposal 74 also satisfies the third step of the proportionality test which involves balancing the competing interests. As illustrated, licensing SEPs via the Agency would not deprive the SEP owner of the right to license bilaterally or enforce their patents against an unwilling licensee. Neither does it threaten the SEP owners' right

⁹¹ Husovec (2019), p. 842.

⁹² Advocate General Opinion Wathelet in *Huawei v ZTE*, Case C-170/13, at fn 34 (citing CJEU, Case C-15/74 *Centrafarm BV v. Sterling Drug*, ECLI:EU:C:1974:114, Judgment of 31 October 1974, para. 9; CJEU, Case C-403/08, *Football Association Premier League*, Judgment of 4 October 2011, para. 107).

⁹³ Griffiths and McDonagh (2013) p. 7.

⁹⁴ *James v United Kingdom* (1986) 8 EHRR.

to receive fair compensation. The objectives of the proposal i.e. improving SEP licensing framework, are thus not disproportionate to the interests of the SEP owners.

In summation, the licensing framework under proposal 74 satisfies the proportionality test. On the hand, by alleviating patent holdout and patent holdup, making SEPs available at a one-stop shop and reducing transaction costs, licensing SEPs through the Agency would achieve the legitimate aim of promoting an effective SEP licensing framework and dissemination of technologies across the EU. On the other hand, as we have already established in the preceding section, the licensing scheme under proposal 74 does not interfere with the patentee's fundamental rights.

7 The Appropriateness of Designating the EUIPO as the Proposal 74 Agency

In 2023, the European Commission floated a proposal for a Regulation on standard essential patents and amending Regulation (EU) 2017/1001 (the Regulation). Despite the heavy criticism that the draft Regulation received,⁹⁵ the European Parliament approved the said Regulation on 24 February 2024; the Regulation now awaits approval by the EU Member States. The Regulation seeks to introduce a raft of changes to the SEP licensing landscape, including designating the European Union Intellectual Property Office (the EUIPO) – the EU institution that is generally concerned with processes in respect to trademarks, design patents and geographical indications – as the entity to administer certain responsibilities pertaining to the licensing of SEPs. For instance, under the Regulation, the EUIPO would be mandated to maintain a register containing critical information, such as essentiality check results, opinions, reports, case laws and rules on SEP licensing in third countries and result of studies specific to SEPs.⁹⁶

According to Recital 12 of the Regulation, the EUIPO has experience in managing databases, establishing and maintaining electronic registers and alternative dispute resolution, hence suited to administer SEP licensing. Nonetheless, some scholars as well as practitioners have been apprehensive that the EUIPO would be saddled with challenges in managing SEP licensing, given that its expertise is in trademarks, designs patents and geographical indications. Furthermore, there are concerns that the EUIPO would be short of personnel to assist it in performing the said licensing responsibilities. However, the Regulation averts some of these concerns, as follows.

Article 1 of the Regulation establishes a competence centre within the EUIPO and charges it with the responsibility to, among others, set up and maintain an electronic register and database, establish and manage a register of evaluators and conciliators, administer a process for determining FRAND and the aggregate royalty rate, and train evaluators and conciliators.⁹⁷ Thus, establishing the said competence

⁹⁵ EARTO (2023); Leanza (2024); Little (2023a); Little (2023b); Wild (2023).

⁹⁶ Recital 12 of the Regulation.

centre means that SEP licensing roles of the EUIPO would be handled by competent personnel and not the contrary.

A related concern is that the licensing scheme under proposal 74 would interfere with the SEP owners' right to determine the FRAND rate in respect to their patents. However, the FRAND determination scheme under both the Regulation and proposal 74 (as already explained in Section 3 above) does not interfere with this right. Article 16 of the Regulation provides that the SEP owners should first agree on the aggregate FRAND rate amongst themselves then communicate the same to the competence centre. The competence centre may also, upon the request of the SEP owners, appoint a panel of conciliators to assist parties in determining the FRAND rates through a non-binding expert opinion.⁹⁸ Furthermore, an independent expert may also be required to recommend the appropriate royalty rate. Lastly, national courts are required to notify the competence centre within six months of any decision concerning SEPs on injunctions, essentiality and validity, and determination of FRAND terms.⁹⁹ These processes, if anything, already exist in the scheme of things, and only reiterated by the Regulation. For example, presently parties may choose to submit their dispute to mediators to assist them in arriving at the appropriate licensing fees. More importantly, some, if not all, of the foregoing progressive aspects, such as the availability of conciliators and notification of FRAND-related national courts decisions, are unavailable in patent pools as well as bilateral negotiations. Arguably, by making experts available to parties, the EUIPO as the proposal 74 Agency would be critical in assisting both small SEP owners and implementers who have no experience on FRAND licensing in concluding licences.

Furthermore, the Regulation expressly requires the EUIPO-based competence centre to offer assistance to small and medium enterprises – the business outfits that are ubiquitous in the IoT – in licensing. The EUIPO would achieve this goal, by, for example, making critical information, such as essentiality checks, non-confidential FRAND determination reports, and national court decisions available in a systematic and centralised way. In exchange, any stakeholder who seeks the relevant information only needs to pay a registration fee which is, in turn used to maintain the competence centre. Although the fee is unknown at the time of writing, we could expect it to be significantly lower than the cost that parties would incur in conducting individual essentiality tests. Overall, designating the EUIPO as the Agency under proposal 74 has potential to offer real advantages to parties and streamline SEP licensing.

8 Conclusion

The IoT introduces complex challenges for licensing of SEPs. Although the current licensing framework has been relatively successful, it is doubtful that it will meet the licensing demands in the IoT. Consequently, it is important to explore the

⁹⁷ See also recitals 12 and 13, and Arts. 4 and 5 of the Regulation.

⁹⁸ Recitals 36-41 and Art. 18 of the Regulation.

⁹⁹ Art. 10 of the Regulation.

appropriateness of multilateral licensing schemes, such as that contained in proposal 74 of the experts' Report to license EU-wide SEPs via a public Agency. This arrangement could improve FRAND licensing by making all EU SEPs available at a one-stop shop, thereby reducing transaction costs and litigation, and alleviate patent holdout and patent holdup. Lastly, in view of the legitimate goals which the proposal aims to achieve, the suggested licensing framework does not pose a disproportionate limit on the fundamental rights of patent holders.

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References

- Barnett JM (2017) Has the academy led patent law astray? *Berkeley Technology Law Journal* Vol. 32: 1313–1380 https://btjl.org/data/articles2017/vol32/32_4/Barnett_web.pdf Accessed 21 Nov 2023
- Baron J (2020) The possible benefits of pool licensing for the internet of things, and the perils of proposed regulatory interventions *The Possible Benefits of Pool Licensing for the Internet of Things, and the Perils of Proposed Regulatory Interventions* (pymnts.com) Accessed 21 Nov 2022
- Brito J, Alvarez HAC (2021) Patent pools: a practical perspective. Part I *Journal of the Licensing Executives Society* Vol LVI No. 4. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3946590 Accessed 30 Apr 2023
- Brito J, Alvarez HAC (2022) Patent pools: a practical perspective. Part II *Journal of the Licensing Executives Society* Vol LVII No. 1. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4019638 Accessed 30 Apr 2023
- Contreras JL (2013) Fixing FRAND: a pseudo-pool approach to standard-essential patent licensing. *Antitrust Law Journal* Vol. 79(1) 48–98 <https://www.jstor.org/stable/43486953> Accessed 4 Aug 2023
- Cotter TF, Hovenkamp E, Siebrasse N (2019) Demystifying patent holdup. *Washington & Lee Law Review* Vol. 79, pp 1501–1565 <https://scholarlycommons.law.wlu.edu/wlulr/vol76/iss4/5/#:~:text=Abstract,arms%20length%20transaction%20ex%20ante> Accessed 20 Nov 2023
- Dasgupta K, Teece D (2023) Protecting innovation in the mobile wireless ecosystem: understanding and addressing patent 'hold-out'. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4585358 Accessed 5 Dec 2023
- Epstein RA, Noroozi KB (2017) Why incentives for “patent holdout” threaten to dismantle FRAND, and why it matters. *Berkeley Technol Law J* 32:1381–1431. https://btjl.org/data/articles2017/vol32/32_4/Epstein_web.pdf Accessed 24 N 2023
- European Commission (2017) Setting out the EU approach to standard essential patents. <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A52017DC0712>
- Gallego BC, Drexl (2019) IoT connectivity standards: how adaptive is the current regulatory framework? *Int Rev Intellect Prop Comp Law* 50(135):156. <https://doi.org/10.1007/s40319-018-00774-w>
- Geiger C (2022) Building an ethical framework for intellectual property in the EU: time to revise the Charter of Fundamental Rights. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3938873
- Geiger C (2006) “Constitutionalising” intellectual property law? The influence of fundamental rights on intellectual property in the European Union. *Int Rev Intellect Prop Comp Law* 37(4):371–500
- Griffiths J (2013) Constitutionalising or harmonising? The Court of Justice, the right to property and European copyright law. *European Law Review* Vol. 38 (1), pp. 65–73 <https://www.researchgate.net/publication/260111111>

- net/publication/256047209_Constitutionalising_or_Harmonising_The_Court_of_Justice_the_Right_to_Property_and_European_Copyright_Law Accessed 14 Apr 2024
- Griffiths J, McDonagh L (2013) Fundamental rights and European IP—the case of Art. 17(2) of the EU Charter. In: Geiger C (ed) Constructing European intellectual property achievements and new perspectives. Edward Elgar Publishing, pp 75–93
- Group of Experts on Licensing and Valuation of Standard Essential Patents (2021) Contribution to the debate on SEPs. https://www.pagewhite.com/images/content/SEPs_Expert_Group_Contribution_to_the_Debate_on_SEPs.pdf Accessed 24 Nov 2023
- Heiden B, Petit N (2018) ‘Patent trespass’ and the royalty gap: exploring the nature and impact of patent holdout. *Santa Clara High Technol Law J* 34(2):179–249 <https://digitalcommons.law.scu.edu/chtlj/vol34/iss2/1/> Accessed 24 Nov 2023
- Heiden B, Rappaport M (2023) Patent holdout and small(er) technology firms. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4350589#:~:text=Abstract,value%20than%20their%20true%20worth. Accessed 23 Nov 2023
- Henkel J (2022) Licensing standard-essential patents in the IoT – a value chain perspective on the markets for technology. *Research Policy* 51:104600. <https://www.sciencedirect.com/science/article/pii/S0048733322001238> Accessed 28 Jan 2024
- Husovec M (2019) The essence of intellectual property rights under Article 17 (2) of the EU Charter. *Germ Law J*. <https://doi.org/10.1017/glj.2019.65>
- Kim B (2017) Distribution among right holders. In: Liu KC, Hilty RM (eds) Remuneration of copyright owners: regulatory challenges of new business models. Springer, pp 141–156
- Kosta V (2019) The principle of proportionality in the EU law: an interest-based taxonomy. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3368867 Accessed 18 Mar 2024
- Leanza S (2024) The EU Regulation on Standard Essential Patents: a way to fix what is not broken? https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4683127. Accessed 17 Aug 2024
- Lemley MA (2007) Ten things to do about patent holdup of standards (and one not to). *Boston College Law Review* Vol. 48, 149–168 <https://lira.bc.edu/work/sc/96f54c41-8858-4a7a-b1ef-cf8ae5430868>. Accessed 20 Nov 2023
- Little T (2023a) Ex-EUIPO head suggests SEP role should not go to agency “with no experience in the field of patents”. <https://www.worldtrademarkreview.com/article/ex-euipo-head-suggests-seps-role-should-not-go-agency-no-experience-in-patents>. Accessed 16 Aug 2024
- Little T (2023b) “We have the capacity to implement whatever the legislators Decide” EUIPO head on SEP regulation. <https://www.worldtrademarkreview.com/article/we-have-the-capacity-implement-whatever-the-legislators-decide-euipo-executive-director-sep-regulation>. Accessed 16 Aug 2024
- Makris S (2022) Cellular standards in the IoT: a brief practical for licensing negotiations. in-house counsel. *Journal* Vol. 15(60) <https://www.iicj.net/library/detail?key=1608>. Accessed 30 Apr 2023
- Mukhopadhyay SC, Suryadevara (2014) Internet of things: opportunities and challenges. In: Mukhopadhyay SC (ed) Internet of things: opportunities and challenges. Springer, pp 1–18
- Nikolic I (2021) Licensing negotiation groups for SEPs: collusive technology buyers arrangements? Their pitfalls and reasonable alternatives. *Journal of the Licensing Executives Society* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3926650 Accessed 28 Nov 2022
- Nikolic I, Galli N (2020) SEP Expert Group Report: a look into the IoT future of SEP licensing. Competition Policy International <https://www.competitionpolicyinternational.com/sep-expert-group-report-a-look-into-the-iot-future-of-sep-licensing/> Accessed 21 March 2023.
- Peters R, Nikolic I, Heiden B (2024a) Designing SEP licensing negotiation groups to reduce patent holdout in 5G/IoT markets. In: Barnett JM, O’Connor SM (eds) 5G and beyond: intellectual property and competition policy in the internet of things. Cambridge University Press, pp 154–174
- Peters R, Hoffmann F, Thumm N (2024b) How to create a smoother licensing ecosystem for IoT. In: Barnett JM, O’Connor SM (eds) 5G and beyond: intellectual property and competition policy in the internet of things. Cambridge University Press, pp 175–192
- Sauter W (2022) Proportionality in the EU law: a balancing act? *Camb Yearb Eur Leg Stud* 24:439–466
- Schneider M (2020) SEP licensing for the internet of things – challenges for patent owners and implementers. Competition Policy International Antitrust Chronicle (2020) <https://www.competitionpolicyinternational.com/wp-content/uploads/2020/03/CPI-Schneider.pdf> Accessed 23 November 2022
- Seigel J et al (2019) Has the promise of patent pools dried up? <https://www.iam-media.com/article/has-the-promise-of-patent-pools-dried#:~:text=A%20fractured%20licensing%20market%20for,around%20a%20proposed%20royalty%20structure> Accessed 18 January 2024

- Statista (2023) Internet of things (IoT) annual revenue from 2019 to 2023. <https://www.statista.com/statistics/1194715/iot-annual-revenue-regionally/>
- Wild J (2023) The European Commission's SEP licensing plans are terrible in every level. <https://www.iam-media.com/article/jw-column-30th-march-2023-ec-sep-licensing-plans>. Accessed 16 August 2024

Internet

<https://caselaw.4ipcouncil.com/>
<https://www.sisvel.com/licensing-programmes/mobile-communications/5g-multimode/>
<https://www.avanci.com/vehicle/5gvehicle/>
<https://www.avanci.com/iot/>

Judgments

Anheuser-Busch Inc v Portugal (2007) 45 EHHR 36
 CJEU, *Huawei v ZTE*, Case C-170/13
Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland, Case C-170/13
James v United Kingdom (1986) 8 EHRR.
Papamichalopoulos v Greece (1993) 16 EHRR.
Smith Kline and French Laboratories Ltd v The Netherlands (1960) 66 DR
Sporrong and Lönnroth v Sweden (1982) 5 EHRR
The Former King of Greece and Others v. Greece (2001) 33 EHRR
The Queen v Minister of Agriculture, Fisheries and Food and Secretary for State for Health ex parte Fedesa et al, Case C-331/88
Volvo, Case C-238/87

Legislation

Directive 1993/83/EEC on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission
 European Commission draft Regulation on standard essential patents and Amending Regulation (EU) 2017/1001
 EARTO (2023) EARTO Position Paper on the EC Draft Proposal for a Regulation on Standard Essential Patents (SEPs). <https://www.earto.eu/earto-position-paper-on-ec-draft-proposal-for-a-regulation-on-standard-essential-patents-seps/#:~:text=EARTO%20agrees%20with%20the%20EC,the%20EC%20to%20this%20topic>. Accessed 17 Aug 2024

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