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Non-Discrimination Obligations in FRAND Disputes: A Need to Reconsider based on Antitrust Concerns

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Abstract

Licenses for standard essential patents must be given on 'fair, reasonable and non-discriminatory' (FRAND) terms to ensure that every licensee gains access to standardised technology without being treated unfairly. However, their compliance depends on the scope of each obligation which has not been defined accurately. In particular, the 'non-discrimination' obligation has been overlooked, although it is vital to restrict patentees' monopoly power. This article highlights the lacuna existing in the European Union (EU) and the United Kingdom (UK) regarding the interpretation of this obligation and the courts' failure to interpret the 'non-discriminatory' aspect of FRAND obligations from the antitrust perspective. It further analyses the effects of price and non-price-based discrimination on competition in the market resulting in economic inefficiencies. The article recommends certain guiding factors to be considered by the courts if discrimination between licensees is allowed. It further suggests a model agreement to fulfil the 'non-discriminatory' obligation from the antitrust lens.

Introduction

Various agencies have facilitated the licensing of Standard Essential Patents (SEP) through negotiations between patentees and implementers by setting up Standard Setting Organisations (SSO) or Standards Development Organisations (SDO).[3] The licensing of SEPs

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[3] J Gregory Sidak, 'The FRAND Contract' (2018) 3 Criterion J on Innovation 1, 2.

to implementers is crucial as it enables the public use of the standard. SSOs require patentees to voluntarily commit to offer licenses to implementers on 'Fair, Reasonable and Non-Discriminatory' (FRAND) terms.[4] Licensing of SEPs on FRAND terms balances the interests of both; the patent holder who will receive commensurate rewards or compensation for the research on the patent, and the implementers who may be prejudiced or harmed by the patentees exercising patent hold up or royalty stacking.[5]

Though SSOs require patentees to declare that licenses for the patent will be granted on FRAND terms, the meaning and ambit of the patentees' license obligations have not been defined by any organisation or statute, but are left to the interpretation of courts. This creates legal uncertainty regarding the terms under which the patents must be made available to the implementers. Although the 'fair and reasonable' undertaking under FRAND has been discussed widely by courts and commentators,[6] the non-discriminatory prong of the obligation has not been addressed effectively. In its recent decision in *Unwired Planet and Anr. v. Huawei and Anr.*[7], Unwired instituted infringement proceedings against Huawei on the grounds that Huawei was using the SEPs belonging to Unwired without accepting the license proposed by it. The reason for Huawei's non-acceptance of the license was that it was not in accordance with the FRAND obligations. The Court was tasked with determining the scope of such FRAND obligations. The UK Supreme Court in the case had merely concurred with the Court of Appeal stating that "*The non-discrimination element in the FRAND undertaking is 'general' and not 'hard-edged' and that there had been no breach of it,*"[8]. Without analysing the non-discrimination obligation of Unwired individually in the backdrop of antitrust concerns, the Court relied on the clause 6.1 of European Telecommunication Standards Institute's (ETSI) Intellectual Property Rights (IPR) Policy to conclude that fair, reasonable and non-

[4] 'ETSI Intellectual Property Rights Policy' <www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf> accessed 7 January 2021, art 6.1.
[5] *Motorola - Enforcement of GPRS standard essential patents* (Case AT.39985) Commission Decision C (2014) 2892 [2014] OJ C344/04.
[6] Damien Geradin, 'Standardization and Technological Innovation: Some Reflections on Ex-ante Licensing, FRAND, and the Proper Means to Reward Innovation' (Intellectual Property and Competition Law Conference, Brussels, June 2006) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=909011> accessed 15 August 2021
[7][2020] UKSC 37, [2020] Bus LR 2422.
[8] ibid [112].

discriminatory must be read as a 'single unitary obligation' imposed on patentees[9] where the non-discriminatory element of FRAND is only used to narrow the scope of 'fair' and 'reasonable'.[10] In doing so, the Court refrained from applying an antitrust perspective to such disputes, the negative effects of which would be analysed in the course of this Article.

Several antitrust issues could arise when patentees discriminate between implementers' absence of an objective justification. Hence, analysing the non-discriminatory prong of the FRAND commitment in the backdrop of antitrust law is necessary. One of the main reasons for imposing the non-discrimination obligation to SEP holders is to avoid placing licensees at a competitive disadvantage when they do not have the option of choosing between different licenses due to the 'essential' nature of SEPs.[11] Hence, the goal of the non-discrimination obligation in FRAND is to preserve competition in the downstream market for standard-compliant products. However, since courts are reluctant to analyse the non-discriminatory obligation from an antitrust viewpoint, the antitrust issues are not adequately dealt with in FRAND disputes. Completely rejecting an analysis from the perspective of competition law merely because it would be more complex, as stated by the High Court of Justice in the UK[12], would overlook instances of discrimination, which in the long run would distort competition in the market. Moreover, UK Courts applying a more general and simpler test rather than antitrust laws raise a concern as to whether SEP holders actually complied with the 'non-discriminatory' obligation in FRAND.

This article seeks to analyse the meaning of 'non-discriminatory' in the FRAND commitment and highlight the importance of assessing it from the viewpoint of antitrust laws, contrary to the position adopted by courts in the EU and UK. This article will first discuss the role of SSOs in determining the meaning of FRAND terms and the inadequacies in their IPR Policies (Section II). It will then examine the decisions of courts in various jurisdictions regarding the application of antitrust laws to the interpretation of the non-discrimination obligation and compare its stance with that of the member states of EU and UK courts (Section III). Further,

[9] ibid [113].
[10] ibid [114].
[11] Group of Experts on Licensing and Valuation of Standard Essential Patents: Contribution to the Debate on SEPs, E03600, 24 January 2021.
[12] *Unwired Planet Int'l Ltd. v. Huawei Technologies Co. Ltd.* [2017] EWCH 711 (Pat) [502].

it will analyse the circumstances under which a patentee acquires a dominant position in the market and thereafter, abuses it by discriminating between implementers on price and non-price-based considerations. The article will also highlight how these factors could distort competition and raise antitrust concerns (Section IV). Finally, the article will recommend the manner in which the non-discriminatory obligation must be re-examined and suggest possible alternatives (Section V).

I. Role of SSOs in determining the scope of non-discrimination

Standard setting organisations are responsible for selecting standards and technical specifications which are required in a particular industry.[13] Such standardisation guidelines allow interoperability between networks and reduce the problem of lock-in effects.[14] It additionally ensures product quality and compatibility between networks.[15] Hence, they play a key role in stimulating innovation. The members of SSOs, in regular meetings, submit their contributions for the formation of a standard and later compare each of the available solutions to finally decide upon the most suitable specifications from the appropriate standard.[16]

Various SSOs such as the European Committee for Electrotechnical Standardisation (CENELEC), European Telecommunications Standards Institute (ETSI), European Committee for Standardisation (CEN), Institute of Electrical and Electronic Engineers (IEEE) and others have formed IPR policies which firstly, regulate the process of standard setting and secondly, ensure that the standard is accessible. This section will focus on the policies of the ETSI as it is the leading SSO in the information and technology industry, which is one of the rapidly

[13] ETSI IPR Policy (n 4) art 3.1
[14] Garry A Gabison, 'Worldwide FRAND Licensing Standard' (2019) 8 American University Business L Rev 139.
[15] Herbert Hovenkamp, 'FRAND and Antitrust' (2020) 105 Cornell L Rev 1683; Herbert Hovenkamp and others, *IP and Antitrust: An Analysis of Antitrust Principles applied to Intellectual Property Law*, (3d edn, Wolters Kluwer 2015).
[16] European Commission, *JRC Science and Policy Report: Fair, Reasonable and Non-Discriminatory (FRAND) Licensing Terms* (2015).

growing industries where standardisation plays a significant role.[17] The ETSI creates globally applicable standards by collaborating with other SSOs[18] and formulates IPR policies and guidelines.

With regard to the FRAND commitment of the members of the ETSI, clause 6.1 of the IPR Policy requires that patentees provide an irrevocable undertaking that they will grant irrevocable licenses on fair, reasonable and non-discriminatory terms and conditions.[19] However, the ETSI does not explain what would constitute fair, reasonable and non-discriminatory terms in SEP licensing. Additionally, the ETSI is not responsible for determining whether the license terms are fair, reasonable and non-discriminatory. Instead, the matter being a commercial one, it is left to negotiations between the parties.[20] This is in consonance with the Guidelines issued by the European Commission on Horizontal Agreements which provides that SSOs need not verify whether license terms comply with FRAND terms as that must be determined by the parties themselves.[21] Further, ETSI neither advocates for any specific licensing model that complies with FRAND terms nor endorses the license terms agreed *ex-ante*.[22]

Most other SSOs, specifically in the EU, follow policies similar to that of the ETSI wherein they do not define the meaning of the FRAND undertaking or interfere with the negotiations and commercial agreements between the parties.[23] It is accepted that parties must be given the commercial freedom to determine their licensing terms but this should not prevent SSOs from

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[17] Ruben Cano Perez, 'Non-Discrimination Under FRAND Commitment. One Size Fits All, or Does Not Fit at All? The Example of Wireless Technology: IoT and 5G' (2019) 54 J of the Licensing Executives Society 257.

[18] 'ETSI: About'<www.etsi.org/about> accessed 8 January 2021.

[19] ETSI IPR Policy (n 4) art 6.1.

[20] 'ETSI: Intellectual Property Rights' (ETSI) <www.etsi.org/intellectual-property-rights#:~:text=ETSI%20IPR%20Policy%20is%20to,under%20FRAND%20terms%20and%20conditions> accessed 7 January 2021 (ETSI:IPR).

[21] Commission, 'Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements' (Communication) COM 2011/C 11/01 ch 7, para 288 (Commission Guidelines).

[22] ETSI: IPR (n 20).

[23] D. Scott Bosworth, Russell W Mangum III and Eric C. Matolo, 'FRAND Commitments and Royalties for Standard Essential Patents' in Ashish Bharadwaj, Vishwas H Devaiah and Indranath Gupta (eds), *SSO Licensing and FRAND Commitments, Complications and Quandaries in the ICT Sector, Standard Essential Patents and Competition Issues* (Springer Open 2018) 24.

providing clarity on the meaning of the separate FRAND obligations which must be undertaken by an SEP holder. The Telecommunications Industry Association (TIA), an SSO in the US, has clarified and explained the ambit of the 'non-discrimination' obligation in FRAND in its IPR guidelines.[24] According to this explanation, licensors are not obliged to provide licenses on the same terms, which means that discrimination between similarly situated licensees is allowed. SEP holders and implementers who are members of other SSOs have brought exactly the same issue before courts, i.e., the extent of discrimination between licensees which may be allowed as per the IPR Policies which the licensor has agreed to.[25] This makes it all the more essential for SSOs to clarify the extent of the FRAND undertaking in order to reduce litigation between parties arising due to the widely differing interpretations of FRAND.

The SSOs' policies highlight that they are not concerned whether the terms are in accordance with the FRAND obligations since they do not provide any expertise in its interpretation. This restricts the role of SSOs to performing merely administrative functions, although they play an important part in the standardisation process. Since there are a variety of different standards, all SSOs may not be able to reach an agreement on the definition of FRAND or the licensing terms which must be employed by parties.[26] However, SSOs can individually make an attempt to clarify the FRAND undertaking which they have obligated SEP holders to subscribe to.

As discussed above, presently, the role of the SSO is strictly confined to selecting standards and its specifications which is purely a technical matter. This necessarily vests the determination of FRAND terms with the negotiating parties and, in the instance of a dispute, the courts.

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[24] 'Guidelines to the Telecommunications Industry Association Intellectual Property Rights Policy' <www.tiaonline.org/wp-content/uploads/2018/05/Guidelines_to_the_Intellectual_Rights_Policy_of_the_Telecommunications_Industry_Association.pdf>_> accessed 15 March 2021.

[25] *Unwired* (n 12).

[26] Committee on Intellectual Property Management in Standard-Setting Processes, *Patent Challenges for Standard-Setting in the Global Economy: Lessons from Information and Communication Technology* (The National Academies Press 2013).

II. Have courts applied antitrust laws?

The courts in other jurisdictions such as the US, India and China, have often relied on antitrust considerations to determine the violation of the non-discrimination obligation. However, courts in the EU member states and the UK have given it only a cursory view and not analysed it based on this consideration.

In cases where the patentees have discriminated between licensees, courts from foreign jurisdictions have discussed the anticompetitive behaviour of patentees and the resulting harm to consumer welfare. The Competition Commission of India passed orders against Ericsson stating that charging different royalty rates based on the final product's sale price was *prima facie* discriminatory and constituted an abuse of dominance under Section 4 of the Competition Act, 2002.[27] The US Court of Appeals for the Third Circuit in *Broadcom Corp. v. Qualcomm Inc.*[28] applied the Sherman Act to conclude that the discriminatory practice of Qualcomm providing licenses to manufacturers only if they purchase the Qualcomm chips, was anticompetitive. In *Huawei v. InterDigital Corp*,[29] the Shenzhen Intermediate People's Court of China held that InterDigital Corp was '*restricting Huawei's ability to compete*' by charging unfairly higher royalty rates to Huawei in comparison to its other licensees. This was held to be discriminatory and in violation of the Anti-Monopoly Law of China.

There is a dearth of judicial decisions regarding the meaning of 'non-discriminatory' terms in SEP licensing in the EU and UK. The few cases that have been decided do not consider such discriminatory terms from the viewpoint of anticompetitive harm. The UK Court of Appeal in *Samsung Electronics v. Unwired Planet*[30] considered the issue of patent assignment and transfer of FRAND obligations. In this case, Ericsson had assigned its SEP to Unwired but did not transfer the obligation to license the SEP on FRAND terms. Samsung argued that without such, Unwired would be allowed to charge higher licensing fees to Ericsson than what it had charged to its previous licensees. This would result in discrimination between the previous

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[27] *Micromax v Ericsson*, Case 50/2013 (CCI); *Intex Technologies v. Ericsson*, Case No. 76/2013 (CCI).
[28] 501 F 3d 297 (3d Cir 2007).
[29] Shen Zhong Fa Zhi Min Chu Zi No 857 (2011).
[30] [2016] EWCA Civ 489.

and subsequent licensees, causing a competitive disadvantage to those who were charged a higher fee. The Court of Appeal held that *"It is arguable that the effect of these higher licence fees will be to distort or restrict competition in downstream markets to the detriment of consumers."*

Justice Birss in *Unwired v. Huawei*[31] applied a similar reasoning but subscribed to the 'general' discrimination test which is based on an overall assessment of the relevant circumstance as opposed to the 'hard-edged' discrimination test according to which the same license must be granted to all licensees. As stated by him, a benchmark royalty rate based on the value of the patent must be set by the court, above which licensors cannot impose royalty rates. However, under the 'general' discrimination test, since licensors are charging royalty rates below the set benchmark, they would be allowed to discriminate between licensees no matter how favoured one licensee may be over the other.[32] In addition to this, Justice Birss did not completely reject the 'hard-edged' discrimination test. Rather, he observed that if the 'hard-edged' test was to be applied, it would be discriminatory only if such discrimination distorted competition.[33] Hence, a complete analysis of the antitrust effects of such discrimination between Huawei and the other licensees of Unwired was conducted in order to determine whether there was an abuse of dominant position or if the discrimination led to distortion of competition. In the end, it was held that although the licensees are similarly situated, since the differential treatment of Unwired did not distort competition, it could be allowed.

Although the judgement of the High Court was affirmed on appeal, the reasoning of the Court of Appeal was starkly different from that of Justice Birss. While the High Court accommodated competition law concerns, the Court of Appeal completely disregarded them by accepting only the 'general' discrimination test while completely rejecting the 'hard-edged' test on the grounds that providing the same license to all licensees was unacceptable. In its judgement, it clearly stated as follows: "*as we have rejected the hard-edged non-discrimination rule, it follows that it is not necessary to deal with this alternative case*", the alternative case here being the discriminatory practices and whether they lead to distortion of competition.[34] This view

[31] *Unwired* (n 12).
[32] ibid [502].
[33] ibid [501].
[34] *Unwired Planet Int'l Ltd. v. Huawei Technologies Co. Ltd.* [2018] EWCA Civ 2344 [210].

has been affirmed by the Supreme Court of the UK which also did not deal with the effects of the discriminatory practice on competition.[35] Subsequently, the German Federal Court of Justice in *Sisvel v. Haier*,[36] relying on Justice Birss' judgement, also reiterated that a 'hard-edged' discrimination test should not be applied.

Therefore, courts in the EU and the UK must rethink their approach and apply a hard-edged test in the instance that the discrimination is anti-competitive. Courts must closely consider such discriminatory behaviours, arising from both price and non-price based discriminations.

III. Discriminatory practices adopted by patentees flagging antitrust issues

Parties are responsible for determining the terms of an SEP license and due to their unbalanced bargaining power, it is possible that terms imposed by the licensor are contrary to its FRAND obligations. If the terms are unacceptable to the licensees, licensees may litigate before courts to determine if the licensing terms are based on FRAND obligations. In such cases, the courts generally take into consideration the object of the FRAND commitment which is to encourage innovation by balancing the interests of the SEP holders and the implementers. However, the aforementioned analysis indicates that while assessing terms which appear to be discriminatory, courts are averse to applying antitrust laws. Courts usually only determine if the terms of the license are fair and reasonable and utilise the non-discriminatory obligation to decide what would constitute fair and reasonable. An antitrust analysis is generally not considered as indicated in the previous section.

Article 102(c) of the Treaty on the Functioning of the European Union (TFEU) prohibits any form of abuse by a dominant undertaking applying dissimilar conditions to equivalent transactions with different parties and thereby placing a few at a competitive advantage.[37] The following analysis suggests that when patentees holding a dominant position discriminate between implementers based on both price and non-price considerations, it may distort

[35] *Unwired* (n 7).
[36] OLG Düsseldorf, File No I-15 U 66/15 (2017) 7.
[37] Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union [2016] OJ C202/1, art 102 (TFEU).

competition and run contrary to Art. 102 of the TFEU. In order to assess abusive dominant practices, the article will delineate the relevant market, the dominance of the patentees in the market, the manner which such patentees may discriminate potential implementers and how these factors would distort competition.

A. Relevant Markets and Dominant Position

Defining the relevant markets is necessary to identify the contours of competition between firms[38] and to assess dominance under Art. 102 TFEU. Since an SEP is declared essential by the concerned SSO, it must be implemented to comply with a particular standard. Hence, standardisation creates a lock-in effect making otherwise substitutable standards practically unavailable.[39] Due to this reason, each SEP individually constitutes the relevant technology market where it holds 100 percent of the market share.[40]

The geographic market must be determined on a case-by-case basis depending upon whether the same standards are applied across different regions. If any particular standard is uniform across the entire globe, SEP holders would be competing on a worldwide basis and hence, the relevant geographic market would be the worldwide market. [41] However, if the standard varies across different regions, an SEP holder would be competing only in the specific region where the standard is uniform. In the instance where the standards applied in the European area are different from other regions, the relevant geographic market would be the European Economic Area.[42]

Under Art. 102 TFEU, the dominant position of an undertaking relates to a position of economic strength of an undertaking wherein it can behave independently of its competitors.[43] In the context of standardisation, a standard is determined by way of an agreement between

[38] Richard Whish and David Bailey, *Competition Law* (7th edn, Oxford University Press 2012) 27.
[39] *Google/MMI* (Case COMP/M.6381) Commission Decision C (2012) 1068 [2012] [54].
[40] ibid; *Unwired* (n 12) [631].
[41] William H Page, 'Judging Monopolistic Pricing: F/RAND and Antitrust Injury' (2014) 22 Texas Intellectual Property LJ 181.
[42] *Google* (n 39) [45].
[43] *United Brands v Commission of the European Communities* [1978] ECR 207, [1978] 1 CMLR 429.

the members of the SSO. Such agreements are not prohibited under Art. 101 TFEU as they tend to create efficiency gains in most cases as contemplated under Art. 101(3) TFEU.[44] However, this confers monopoly power on the patentee by excluding all other possible alternative standards[45] and creates a 'lock-in' effect.[46] This allows the patentee to exercise dominance in the market by setting prices and establishing terms independent of any competitors.

B. Manner of Discriminating between Implementers

While exercising dominance in the market, patentees may discriminate between implementers based on price and non-price considerations.

1. Non-price-based discrimination

Scenario 1: Exclusionary Conduct

Patentees usually prefer to license the SEP only to end-product manufacturers rather than any other implementers which includes component manufacturers[47] with the intention of circumventing the problem of patent exhaustion and allowing patentees to deal with end-product manufacturers directly.[48] Component manufacturers thus lose their ability to negotiate their terms or even deal with end-product manufacturers. Patentees would have an incentive to refuse licenses to component manufacturers as it would ensure that they derive maximum profits for their patents by charging higher royalty rates to end-product manufacturers. Hence, patentees may exclude a certain class of implementers from gaining access to the license by refusing to license the SEP.

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[44] Commission Guidelines (n. 21).
[45] Dennis W Carlton and Allan L Shampine, 'An Economic Interpretation of FRAND' (2013) 9 J Competition Law and Economics 531.
[46] *Apple Inc v Motorola Inc* 869 F Supp 2d 901 (2012).
[47] Roberto Grasso, 'Selected Issues in SEP Licensing in Europe: The Antitrust Perspective' in Ashish Bharadwaj, Vishwas H. Devaiah and Indranath Gupta (eds), *SSO Licensing and FRAND Commitments, Complications and Quandaries in the ICT Sector, Standard Essential Patents and Competition Issues* (Springer Open 2018) 86.
[48] ibid.

Since there are no substitutes for a particular SEP, component manufacturers cannot obtain licenses from other patent holders to manufacture their product in case the SEP holder refuses to license the SEP to them. Further, since the SEP is an essential facility, the licensee requires the SEP to manufacture its product. Due to the SEP holder's conduct, component manufacturers will be forced to stop manufacturing that product, thereby foreclosing the market for the particular component. This in turn will place the component manufacturers at a competitive disadvantage.

In such scenarios concerning SEPs, no case where exclusionary conduct against component manufacturers which constitutes an abuse of dominant position under Art. 102 of the TFEU has been presented before the European Commission or the courts in the UK.[49] However, a distortion of competition can be seen if Art. 102 of the TFEU is analysed to bring out exclusionary conduct by virtue of a refusal to deal as mentioned above.

The ETSI Policy under Section 6.1 provides that an SEP holder must grant licenses on FRAND terms for the manufacture of customised components.[50] The IEEE guidelines connote that the patentees are obliged to make available the licenses to component level manufacturers. These guidelines are put in place to ensure that SEP holders do not abuse their dominant position and distort competition by refusing to grant licenses. Since every implementer can gain access to the standardised technology, such a scenario would occur only where the SSO's policy does not regulate this issue adequately. If a case does present itself before a court, the breach of the SEP holder's obligations which are imposed by an SSO must be looked into. If an SSO has not imposed such obligations, the court must analyse if such conduct has led to antitrust violations.

Scenario 2: Discriminating in their own favour

Vertically integrated patentees, *i.e.*, patentees who manufacture end products as well, can discriminate between their direct competitors and other implementers in the downstream

[49] ibid.
[50] ETSI IPR Policy (n 4).

market by refusing to grant licenses to direct competitors or by granting licenses on less favourable terms.[51]

If the patentee is an end-product manufacturer, it can refuse to license the patent to other end-product manufacturers who are its direct competitors in the downstream market and thereby create a monopoly or an oligopoly in the market for end-products by abusing its market power as an SEP holder. Such behaviour places the patentee at a competitive advantage and forecloses the market to its competitors as the license is essential for the product to be manufactured and sold, since the standardised technology must be implemented to comply with the standards set by the SSO.

In the *Commercial Solvents*[52] case, the Commission held that refusing to supply raw materials with a view to reserve such materials for manufacturing its own products would eliminate competition on the part of a customer and hence constitutes an abuse of dominant position under Art. 102 of the TFEU. This lays down the general rule regarding refusal to supply, whereas, in the *Microsoft case,*[53] refusal to license IP was deliberated upon by the Court. It was observed that the interoperability information which Microsoft refused to share was an IPR and hence refusal to share did not *in itself* constitute an abuse of dominant position as the company has an *exclusive* right over the information.[54] However, if three cumulative circumstances were fulfilled, namely, (1) the refusal related to a product or service which is indispensable, (2) the refusal excluded effective competition and (3) it prevented the appearance of a new product in the market, the refusal to license would constitute an abuse of dominant position.[55]

The fulfilment of these conditions is extremely fact specific and hence must be looked into by courts on a case-by-case basis to check if such discriminatory conduct is present. In the instance all these conditions are fulfilled, it would lead to a distortion of competition in the

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[51] Daniel G Swanson and William J Baumol, 'Reasonable and Nondiscriminatory (Rand) Royalties, Standards Selection, and Control of Market Power' (2005) 73 Antitrust LJ 1, 26-27.
[52] *Commercial Solvents Corp. v. Commission* (Case 72/457/EEC) Commission Decision CMLR 309 [1974].
[53] *Microsoft Corp v Commission of the European Communities* [2007] ECR 3601, [2007] 5 CMLR 846.
[54] ibid [312].
[55] ibid [332].

relevant product market and raise antitrust concerns. As noted by scholars, discriminatory conduct of such nature would "*exclude effective competition in the neighbouring market*".[56]

<u>*Scenario 3: Bundling of licenses/patent portfolios*</u>

Patentees tend to bundle both essential and non-essential patents and offer them to implementers. In such cases, a license for the SEP is granted only if the licensee agrees to accept all the bundled licenses, even if some of them may not be particularly useful for the licensee. In doing so, the patentee could discriminate between implementers who are benefitted by receiving the entire bundle and those for whom it would be disadvantageous. This invariably affects the licensee's rational buying decisions.[57] Though it may be argued that market freedom is an accepted norm, the object of antitrust law is to prevent abusive conduct which pervades market freedom.

Even though tying and bundling is not illegal in the first instance, if the conduct does not improve efficiency and induce a likelihood of exclusion, the conduct would be considered discriminatory.[58] The economic inefficiency can be easily ascertained as customers, *i.e.*, the licensees, will accept only those patents that, according to their valuation, exceed the marginal cost of the licensed technology.[59] If the licenses are bundled, the licensees with the increased royalty will not accept it as their valuation does not exceed its marginal value. Hence, such bundling will lead to licensees deciding not to accept the licenses or accepting the licenses for non-essential patents at a royalty rate which is higher than that which is offered by other competitors in the market. This being said, there will be instances where the bundled licenses' value exceeds the marginal cost and prove beneficial to the licensees. Hence, not providing a choice between an *à-la-carte* decision and compulsory bundling will lead to a discriminatory practice between licensee who may benefit from the tied-in licenses and licensees for whom obtaining the license for the non-essential patents would be economically inefficient. In order

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[56] Whish and Bailey (n 38) 801.

[57] Tu Thanh Nguyen, *Competition Law, Technology Transfer and the TRIPS Agreement Implications for Developing Countries* (Edward Elgar Publishing Ltd. 2010) 93.

[58] Stan J Liebowitz and Stephen E Margolis, 'Seven Easy Pieces: The Ideal Is the Enemy of the Efficient' in Geoffrey A. Manne and Joshua D. Wright (eds), *Competition Law and Patent Law Under Uncertainty, Regulating Innovation*, (Cambridge University Press 2011) 79.

[59] ibid.

to recoup the costs of the non-essential patents, licensees may price their products higher than the market price. This in turn places them at a competitive disadvantage as against those licensees who can implement both the essential and non-essential patents.

Such a case was brought before the National Development and Reforms Commission of China which condemned the bundling of SEP and non-SEP licenses practiced by Qualcomm. The Commission observed that this would lead to the market foreclosure by limiting the options which a licensees would otherwise have.[60] However, courts in the UK have not discussed the antitrust concerns arising from tying and bundling of such patents with respect to the FRAND undertaking and effect it would have on implementers. Contrarily, courts would only discuss the effects such tying and bundling would have in the market for non-essential patents. This is observed in *Unwired Planet v. Huawei,*[61] where the court focused on the elimination of competition in the non-SEP market although Huawei submitted that it is difficult to determine compliance of FRAND obligations in a license containing tying and bundling of SEP and non-SEPs. Since compliance of FRAND obligations by the patentee directly affect the licensee, the Court had the opportunity to delve into the effects of tying and bundling practices on individual licensees who are not connected to the non-essential patents market. As per the analysis mentioned above, licensees can face a competitive disadvantage due to tying and bundling practices and hence it is imperative that courts look into this issue.

Scenario 4: Exclusive grantback

SEP holders at times tend to include compulsory exclusive grantback clauses in their license to protect their position as a patent holder and generate additional profits. However, this has the effect of hampering innovation while also indirectly discriminating between implementers who are mere manufacturers and those who are technology developers.[62] Exclusive grantbacks require the licensees to vest the right to use improvements made on the

[60] Bruce H Kobayashi, 'Two Tales of Bundling: Implications for the Application of Antitrust Law to Bundled Discounts' [2007] George Mason Law and Economics 5/2007 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=796432> accessed 9 January 2021.

[61] *Unwired* (n 12).

[62] Jorge L Contreras and Anne Layne-Farrar, 'Non-Discrimination and FRAND Commitments' in Jorge L. Contreras, *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust and Patents* (Cambridge University Press 2017) 199.

patent solely to the patentee.[63] Hence, the technology developers lack incentives as they cannot further license the improvements made to gain royalties from other licensees. However, manufacturers are unaffected by such clauses as the mere usage of the technology does not involve any further development of it. Hence, a close analysis proves a 2-prong distortion of competition by virtue of discriminatory conduct wherein the position of manufacturers is maintained at status quo whereas the position of technology developers is rendered worse-off.

Although a grantback clause is not illegal in itself, both the US Federal Courts and the European Commission have condemned *exclusive* grant back clauses with unlawful restraints on trade as they are in violation of antitrust law. In *United States v. General Electric Co.*[64], the US Courts found that the grant back clause was in violation of antitrust law as it was a part of the patent acquisition policy of the patent holder where the patent holder would have control over the patent even after its expiry. On the other hand, technology developers will not be able to recoup their costs of development of the technology as they cannot license the developments which they have made to the patent. Therefore, by imposing exclusive grantback clauses, SEP holders are able to maintain their monopoly in the SEP market while foreclosing the market to technology developers.

Though *Scenarios 1* and *2* are patently discriminatory, *Scenarios 3 and 4* require further investigation to identify the discriminatory nature of such behaviour. Courts in the EU and the UK have not looked into SEP disputes from the aforementioned viewpoints. The UK Supreme Court in *Unwired Planet v. Huawei*[65] opined that the courts would not interfere with agreements between parties as they are based on the negotiations and commercial merits of the transaction. This means that courts would not look into agreements and clauses in agreements which are not patently discriminatory, which, in turn would mean that the agreements which may be anti-competitive in nature would not be restricted by the courts.

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[63] Jorge Padilla, Douglas H Ginsburg and Koren W Wong-Ervin, 'Antitrust Analysis Involving Intellectual Property and Standards: Implications from Economics' (2019) 33 Harvard J. of Law and Technology 1, 33.

[64] **272 US 476 (1926).**

[65] *Unwired* (n 7).

Furthermore, another concern would be that the disputes would not reach the court in the first place since the licensee will be oblivious to the terms agreed upon by other licensees[66] and will not be aware of the long-term effects of such concealed discriminatory conduct. Though the parties have agreed to certain terms, it may not be in compliance with the FRAND obligations of the patentee or any other economic efficiency consideration. As already discussed in each scenario, such discriminatory conduct can lead to violation of Art. 102 TFEU.

Hence, the courts must adjudicate such disputes cautiously in order to protect competition. In the instance of no dispute, a framework could curb discrimination in toto and it must be provided to determine if one party is being discriminated as against the other to create the most efficient outcomes.

2. Price Based Discrimination

Price discrimination is a strategy that is employed when sellers charge different customers different prices for the same goods or services supplied. Perfect price discrimination describes a situation where the seller knows exactly each customer's willingness to pay and can charge each customer a different price.[67] However, in reality price discrimination is not perfect as the sellers are not capable of accurately determining the willingness of each individual to pay for the product due to high transaction costs; making perfect price discrimination impossible.[68] Contrary to the judgement in *Unwired Planet v. Huawei*,[69] a situation of economic efficiency can only be achieved in instances of perfect price discrimination which is an idealistic scenario. Since this cannot be achieved, the other methods of price discrimination which are listed below must be considered.

There are multiple manners in which sellers tend to discriminate between customers based on price.

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[66] ibid.

[67] N Gregory Mankiw, *Principles of Economics* (6th edn, Cengage Learning 2012) 316.

[68] ibid.

[69] *Unwired* (n 7).

Scenario 1: Discriminating in their own favour

Vertically integrated patent holders may charge higher royalty rates to downstream producers to favour their own downstream sales and thereby increase their market power in the product market.[70] This is also termed as 'margin squeezing' wherein the patent holder leaves an insufficient margin between its upstream and downstream product thereby indirectly favouring itself.[71] This can lead to exclusionary conduct either when the patent holder is able to price its downstream products at a lower price than other downstream producers or when the downstream producer obtaining a license from the patent holder is unable to derive any profits due to a higher royalty rate/ insufficient margin. Such discriminatory practices would restrict other end-product manufacturers from selling their product at the market equilibrium price. This would decrease the number of choices that a consumer would have, leading them to ultimately opt for the patentee's product since it is available at a lower price. In the long term, this would drive out competitors from the market and enable the patentee to monopolise the downstream market.

Scenario 2: Imperfect Price Discrimination

Sellers may charge customers based on the value which each customer would ascribe to the product. In SEP licensing, patentees license the SEP on royalty rates which the licensee expects to be charged.[72] Due to the complexity of the SEP licensing process, patentees would not be able to gauge the value which licensees would be willing to ascribe to the patent. Although first degree of competitive harm does not distort competition as the licensees are charged different royalty rates on an objective basis, it may lead to economic inefficiencies if an improper value is attached to the patent. This results in patentees diminishing the licensees' consumer surplus which may cause the licensee to be placed at a competitive disadvantage.[73]

[70] Swanson and Baumol (n 51) 26.
[71] Whish and Bailey (n 38) 754.
[72] Lizhi Ning, Shubha Ghosh and Wei Zhou, 'Price discrimination in patent licensing and the application of FRAND' [2015] J. of Antitrust Enforcement 1, 4.
[73] ibid 11.

Scenario 3: Discrimination based on Volume of Output

Prices may also be determined based on the volume of the output. Patentees provide royalty rates based on the number of units produced by the licensee using the patented technology.[74] Discrimination between 'similarly situated' licensees[75] or 'equivalent transactions' is disallowed under Art. 102(c) of the TFEU.[76] In such cases, licensees are given quantity rebates, ergo discriminated based on the number of units they produce. As such, there is no evidence of competitive harm in such cases.

Scenario 4: First Degree of Price Discrimination

Sellers also charge different categories of customers different prices based on certain observable characteristics. In this instance, licensees are divided into different classes and charged different royalties based on such division.[77] This manner of price discrimination is most often seen in the case of IP licensing where, for example, licensees are divided into different classes based on the kind of standardised products they make.[78] Again, offering the same terms to 'similarly situated' licensees whereas offering different terms to dissimilar licensees is an accepted form of price discrimination.[79] However, since the meaning of 'similarly situated' and the factors which must be considered when determining this meaning has not been decided conclusively, problems may arise. Placing directly competing licensees at dissimilar positions would allow patent holders to freely discriminate between these licensees. Such price discrimination, where one licensee is charged higher than the other for no objective reason would have a final effect on the price of the goods sold by the licensees. Since the favoured licensee can sell the goods at a much lower price than the others, consumers would only choose the products which are cheaper, thereby affecting the licensee who was discriminated against by ultimately driving it out of the market. Hence, inaccurately defining this term would lead to anticompetitive concerns.

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[74] ibid 11.
[75] Anne Layne-Farrar, 'Nondiscriminatory Pricing: is Standard Setting Different?' (2010) 6 J of Competition Law & Economics 811, 815.
[76] TFEU (n 37) art. 102(c).
[77] Ning, Ghosh, Zhou (n 72) 11.
[78] Daniel A Crane, 'Patent Pools, RAND Commitments, and the Problematics of Price Discrimination' (2008) Cardozo Legal Studies Research Paper 232, 26 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1120071> accessed 5 January 2021.
[79] Farrar (n 75) 815.

The first degree of price-based discrimination or the third degree of competitive harm can have a large number of antitrust concerns as analysed above, eventually hampering competition in the market and also consumer welfare. Such price discrimination must be allowed in situations where the implementers are dissimilarly situated as it would achieve the most efficient outcome for both parties. Thus, defining the contours of similarly and dissimilarly situated licensees is crucial for both; improving the economic efficiency and promoting pro-competitive effects.

IV. Recommendations

As highlighted in the earlier section, there are antitrust concerns that surround the non-discrimination obligation of the FRAND Commitments that must be scrutinised closely by the courts. Art. 102 TFEU allows discrimination between parties who are dissimilarly situated as long as such discrimination does not produce anticompetitive effects. The ambit of similarly situated and dissimilarly situated licensees in SEP licensing should ideally be defined by SSOs, as they have adequate information and expertise about the patent, the patent holder and the licensees. However, this has not been done by such organisations; neither do any guidelines or cases provide any direction in this respect. Hence, it is imperative to identify the possible avenues which can be taken to define similarly and dissimilarly situated parties and then determine whether such classification is valid or opposed to antitrust law.

A. Classifying Licensees based on Average Price of the End Product and Total Number of Units Sold

Discriminating between implementers solely based on the average price of the end product or the total number of units sold, though on the face of it appears to be non-discriminatory, it can be grounds for discrimination upon a closer look.

Illustration: Company A and Company B use the same standard of 5G in their product which possesses the same features but with a different operating system. Company A may charge £1000 for each phone it sells in the UK market, whereas Company B may charge £800 for each phone it sells in the UK market. If price discrimination is allowed in terms of the average price of each unit, Company A would be expected to pay a higher royalty, whereas Company B will pay a lower royalty. However, there is a possibility that Company B, as it manufactures budget phones for £800, produces a greater number of units than Company A in a year. Hence, it can also be argued that since Company B produces more units in a year, they should be charged a higher royalty in comparison to Company A. Although such decisions are purely a commercial matter, there would be no objective reason why the patentee should opt for one kind of classification over the other. Hence, such discrimination would not be completely objective.

Other authors suggest[80] that either one circumstance is a good factor to discriminate. However, contrary to these suggestions, in order to resolve this conflict, it is important to consider both factors concurrently. Hence, if the price per product is (P) and the number of units sold is (Q), the total amount sales in a year (S), wherein S = P x Q must be determined first to evaluate the value ascribed by each licensee to the license before discriminating them. This is similar to the practice of receiving a percentage commission based on the total sales value. The total sales amount will be a good indicator to determine if the two implementers are actual competitors who are similarly situated.

B. Classifying Licensees based on their Country of Origin

This method of discriminating between implementers originating from developed, developing and under-developed countries *prima facie* seems to encourage the indigenous implementers from developing and under-developed countries by providing more favourable terms. However, FRAND's objective was to disregard and discourage such inherently

[80] Perez (n 17) 260.

protectionist tendencies.[81] Firstly, it would be difficult to determine the country of origin since most SEP holders have been established in several countries. Secondly, there are also possibilities that if such protections were given, other companies would exploit them by setting up their companies from such regions, invariably making the exercise futile. Hence, this manner of discrimination must not be allowed.

C. Classifying Licensees based on the Products Sold

The patentees can discriminate between those implementers who are selling different products in the market though they use the same standards. In this scenario, the relevant product market of the implementers is demarcated to determine whether the implementers are direct competitors and accordingly, whether they can be differently treated. This is an acceptable classification because the implementers in such a case do not directly compete and hence can be said to be dissimilarly situated. If such discrimination is allowed, it is also imperative that the patentees offer the licensed technology to the licensee at varied royalty rates for different products such that the rates are comparable as against their respective competitive goods. The difference in the royalty rate for the goods may be based on the incremental value of the patented technology.[82]

D. Classifying Licensees based on their Financial Position

The various implementers who are in a stronger financial position or with a higher turnover should not be discriminated against by the patentees by enforcing higher royalty payments. Such discrimination runs in stark contrast to the ideals of the FRAND commitment and Art. 102 of the TFEU since different financial position does not mean that competitors are dissimilarly situated in the market.[83]

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[81] David J Teece, Edward F Sherry and Peter C Grindley, 'On the "non-discrimination" aspect of FRAND licensing: A response to the Indian Competition Commission's Recent Orders' (2018) 30 IIMB Management Review 10, 13.
[82] Contreras and Farrar (n 62) 202.
[83] [2018] EWCA Civ 2344.

E. Classifying Licensees based on their Market Power and other Surrounding Circumstances

The SEP holders, in most cases, have a monopoly in the market as there are practically no other substitutes once the standard is accepted since the standardisation itself creates a lock-in effect. While negotiating terms, they should not favour the implementers with higher market power or bargaining power on the premise that such an implementer can approach the court to amend the license and include favourable terms. Further, patentees would desire greater acceptance of the standard and hence would be inclined to grant better terms or lower royalty rates to licensees which are established in the industry. In addition to this, the patentees themselves would want to avoid the long-drawn and costly process of litigation. When implementers with a stronger bargaining power are granted a lower royalty, the patentees, in order to offset this and recoup their cost, may charge the implementers at a weaker bargaining position higher royalty terms. These implementers, who are in a comparatively weaker position, might accept unfair terms as they would be apprehensive of the expenditures which would be incurred to litigate and enforce FRAND terms against the patentees. This is because it would be extremely difficult for them to recover from a lengthy litigation process. Therefore, discriminating between the two implementers who have different market power should not be advised.

F. Amending the IPR Policy of SSOs

In addition to the aforementioned recommendations, there still exists an issue with non-priced based discrimination. In order to overcome this problem of non-priced based discrimination, a viable solution would be to frame additional terms in the IPR policy of each SSO. These terms may be different for different standards and must be amended from time to time with the development of new standards. For the purposes of this paper, the structure and powers of the ETSI will be looked into. The ETSI comprises of members which include patentees, implementers, government and public organisations,[84] who are tasked with creating IPR policies and directives for the recognition and derecognition of standards. These IPR policies

[84] 'ETSI membership' (ETSI) <https://www.etsi.org/membership> accessed 19 April 2021.

provide that SEP holders must give licenses to all implementers on FRAND terms and if the licenses are made unavailable on such terms after the recognition of the standard, the General Assembly of the SSO has the power to revoke the recognition of the standard upon receiving information from the Director-General.[85] Since the General Assembly must determine if the license is provided in accordance with FRAND terms, the SSO can recommend and enforce terms which are necessary to comply with the FRAND obligations.

The additional terms should provide the contours within which parties must negotiate. Such terms depend on factors such as the product of the implementer, the total sales, the price of the product, the other patents of the SEP holder and such other considerations. A range of royalty rates or a royalty ceiling must be prescribed for each standard wherein, patent holders must not fix their rates beyond this range or ceiling. In the instance the patent holder wishes to bundle patents, they must be obligated to provide an option to the licensees to either accept a license for the entire bundle or only for the SEP. Patent holders should be restricted from forcing licensees to accept patent bundles which would be inefficient for them to purchase otherwise. SSOs must also restrict addition of exclusive grantback clauses to agreements as it would hamper innovation by disincentivising developers who would otherwise have the rights over the developments.

Prescribing such terms on the basis of which the agreement between the parties should be modelled, would not contravene the provisions of Art. 101 TFEU. Such terms make the patent available and accessible to all licensees thereby making full use of the patent and promoting innovation. As highlighted in the discussion under Part IV(B), without the enforcement of such terms, patentees could abuse their dominant position which may lead to licensees receiving restricted access to the patented technology. Hence, the enforcement of these terms is indispensable to the objectives of providing the SEP license on FRAND terms and it thus falls within the exception provided under Art. 101(3) TFEU. Therefore, the addition of these terms to the IPR Policies of SSOs is not in violation of Art. 101 TFEU.

[85] ETSI IPR Policy (n. 4) art 8.2.

Conclusion

In a fast-growing economy, to promote development, essential patents are required to be standardised. SEP holders through various commitments to SSOs are required to provide licenses on FRAND terms. This is, however, hampered by the lack of clarity of what the terms, specifically, 'non-discrimination' mean. Courts in the EU and the UK have interpreted to a reasonable extent the scope of the 'fair and reasonable' obligation, but have not specifically considered the issue of 'non-discrimination' from an antitrust point of view. The SSOs also do not play a major role in the interpretation of such terms, since their policies make it clear that they do not endorse the interpretation of FRAND by any member of the SSO and neither do they provide the model basis of an agreement based on FRAND terms.

This article analyses the issues of non-discrimination from the antitrust perspective by inspecting the various circumstances in which the implementers can be discriminated against based on both, price and non-price based considerations. It becomes imperative for such issues to be looked into either at the stage of negotiation or at the stage of a dispute.

This problem can be resolved by interpreting the scope of similarly situated implementers under Art. 102(c) of TFEU. This article recommends that discrimination on price-based considerations should not be allowed and if it is permitted, this article lays down the various criteria which can be employed to determine if competitors are similarly situated or dissimilarly situated. Such criteria would provide a framework for courts to determine whether a discriminatory practice should be allowed. Further, the article also recommends that, in order to solve the problem of non-priced discrimination, there should be amendments made to the existing IPR Policies of each SSO that must be framed for SEP licensing and tailor-made to satisfy the requirement of a particular standard. Agreements between patentees and implementers must be negotiated only within the contours of these terms. Adopting the above recommendations would provide certainty on the ambit of non-discrimination and provide an essential guiding factor to courts; which may duly consider the same while adjudicating such disputes.