

SEP LICENSING AFTER TWO DECADES OF LEGAL WRANGLING: SOME ISSUES SOLVED, MANY STILL TO ADDRESS



BY DAMIEN GERADIN¹



¹ Professor of Competition Law & Economics, Tilburg University and visiting Professor, University College London; Founding Partner, Geradin Partners (www.geradinpartners.com). The author has represented a range of SEP holders and implementers over the years. The views expressed in this paper are personal.

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I. INTRODUCTION

Over the past two decades, issues linked to the licensing of standard-essential patents (“SEPs”) have kept intellectual property (“IP”) and competition lawyers busy. As is well known, SEP licensing is a conflictual area for several reasons. First, companies have different business models. While some market players have developed a licensing business model and thus try to maximize licensing revenues, others generate the vast majority of their revenues through selling SEP-compliant products and thus have an interest in minimizing licensing fees. Second, there is a lot of money at stake, as SEP holders with large portfolios will often seek hundreds of millions of euros for the licensing of their patents, hence making litigation worth its costs. Finally, while SEPs should be licensed at fair, reasonable and non-discriminatory (“FRAND”) terms, what FRAND means in practice is subject to interpretation. In this fertile ground for disputes, EU competition law, and in particular Article 102 TFEU, has been often used as a defense by SEP implementers facing what they considered to be unreasonable demands from SEP holders.

Against this background, this short paper explores where we stand after two decades of European Commission (“Commission”) investigations, substantial patent litigation in national courts, and a major judgment of the Court of Justice of the European Union (“CJEU”) devoted to SEP licensing and its relationship with EU competition law. As will be seen, while consensus has been reached over several issues, a lot remains to be done. This paper is divided in four parts. Part II describes the issues that have been addressed, albeit not always satisfactorily, by competition authorities and courts over the past years. Part III discusses some of the SEP licensing issues that still largely need to be solved with a focus on six questions: (i) what is the nature of the FRAND commitment?; (ii) what is a FRAND license?; (iii) should the gaps left by the CJEU in *Huawei v. ZTE* be filled and if so how?; (iv) can a court that finds that local SEPs have been infringed force the infringer to take a global license on pain of an injunction?; (v) access for all v. license to all: What are the obligations of the SEP holder?; and (vi) how should SEP licensing adapt the IoT context? Part IV concludes.

II. SEP LICENSING AND EU COMPETITION LAW: SOME ISSUES SOLVED

While the complex relationship between standardization, SEP licensing and competition law was not entirely unknown from the Commission,² the Commission’s first major cases arose in the mid-2000s with the *Rambus* and *Qualcomm* investigations. These cases were then followed a few years later by the *Samsung* and *Motorola* investigations, and then by the landmark CJEU in *Huawei v. ZTE*. In this part, I provide a brief summary of these cases, the issues that were addressed and why many important issues remain unsolved.³

² See, e.g. Communication from the Commission “Intellectual Property Rights and Standardization,” October 27, 1992, COM (92) 445 final.

³ This part draws on Damien Geradin, “European Union Competition Law, Intellectual Property Law and Standardization,” in J. Contreras Ed., *Cambridge Handbook on Technical Standardization Law* (2017).

In *Rambus*, the Commission was concerned that Rambus had engaged in a “patent ambush” by intentionally concealing, during the formation of the standard, that it held patents and patent applications which were relevant to technologies used in the standard that was elaborated within JEDEC (the standard-setting organization (“SSO”) in question), and subsequently claiming unreasonably high royalties for those patents.⁴ In December 2009, the Commission brought this investigation to an end by adopting a commitments decision, whereby it rendered legally binding Rambus’s commitment to cap the licensing fees that Rambus could charge for certain patents essential to JEDEC’s standard for DRAM’s chips.⁵

The *Qualcomm* case was essentially also about alleged excessive royalties. Six firms active in the mobile phone equipment sector, including Nokia and Ericsson which at the time were major OEMs, filed complaints with the Commission, alleging *inter alia* that Qualcomm’s licensing terms and conditions for its patents essential to the WCDMA standard did not comply with Qualcomm’s FRAND commitment and thereby breached EU competition rules.⁶ The difficulty for the Commission was that, while Qualcomm’s royalties were alleged to be unreasonably high, it was not easy to demonstrate that they were “exploitative” within the meaning of Article 102(a) TFEU. After a long and thorough investigation, the Commission eventually decided in 2009 to bring its formal proceedings against Qualcomm to an end.⁷

The outcome of the much-publicized *Qualcomm* case was clear: while the Commission was willing to investigate complaints alleging that abusive SEP licensing practices had been committed, it would not act as a “royalty regulator.” Handling disputes as to the level of royalties (or more generally licensing terms) was a task that should be left to courts or alternative dispute-resolution mechanisms.

The Commission was, however, soon again embroiled in SEP licensing disputes as it received in 2012 complaints against *Samsung* and *Motorola* arguing that by seeking injunctions against SEP implementers, which were willing to take a license, they had failed to honor its FRAND commitments and breached Article 102 TFEU.⁸ These investigations were more promising than the investigation that had been launched against Qualcomm because the focus was not to determine whether the royalties that Samsung and Motorola had sought to obtain from standard implementers were excessive, but whether the tool that was used to allegedly force these implementers to pay excessive royalties were compatible with Article 102 TFEU. These investigations thus allowed the Commission to address the perceived *source* of the problem (i.e. the leverage created using injunctions) rather than its *symptoms* (i.e. high royalty demands). These investigations raised complex legal and policy questions, however, as the use of injunctions is a remedy expressly recognized in patent law (rather than a special scheme devised by the investigated companies). Moreover, depriving SEP holders from relying on injunctions under any circumstances may incentivize standard implementers not to take a license, hence increasing the risk of “hold-out.”

In April 2014, the Commission adopted two decisions respectively against Samsung and Motorola. In the *Samsung* case, the Commission issued a commitments decision rendering legally binding the commitments that had been offered by Samsung, whereby Samsung agreed not to seek injunctions in the EU on the basis of SEPs for mobile devices against licensees who agree to be bound by a specified licensing framework.⁹ In the *Motorola* case, the Commission adopted an infringement decision in which it considered that Motorola held a dominant position on the market for the licensing of its GPRS essential patents and ruled that Motorola abused its dominant position by both seeking and enforcing “an injunction against Apple in Germany on the basis of an SEP which it had committed to license on FRAND terms and where Apple had agreed to take a license and be bound by a determination of the FRAND royalties by the relevant German court.”¹⁰

4 See “Commission confirms sending a Statement of Objections to Rambus,” MEMO/07/330, August 23, 2007, available at http://europa.eu/rapid/press-release_MEMO-07-330_en.htm.

5 See “Commission accepts commitments from Rambus lowering memory chip royalty rates,” IP/09/1897, December 9, 2009, available at http://europa.eu/rapid/press-release_IP-09-1897_en.htm?locale=en.

6 Antitrust: Commission initiates formal proceedings against Qualcomm, MEMO/07/389, October 1, 2007, available at http://europa.eu/rapid/press-release_MEMO-07-389_en.htm.

7 “Commission closes formal proceedings against Qualcomm,” MEMO/09/516, November 24, 2009, available at http://europa.eu/rapid/press-release_MEMO-09-516_en.htm.

8 Antitrust: Commission opens proceedings against Samsung, IP/12/89, January 31, 2012, available at http://europa.eu/rapid/press-release_IP-12-89_en.htm.

9 Case AT.39939 - *Samsung - Enforcement of UMTS standard essential patents*, April 29, 2014, C (2014) final. The licensing framework provides *inter alia* for a negotiation period of up to 12 months, and if no agreement is reached, a third-party determination of FRAND terms by a court if either party chooses, or by an arbitrator if both parties agree on this. The advantage of this framework is that it guarantees that licensing disputes that Samsung and potential licensees of its SEPs cannot solve on their own will be brought to an end by the intervention of an independent third party, i.e. an arbitral tribunal if the parties agree or a court if they do not.

10 Case AT.39985 - *Motorola - Enforcement of GPRS standard essential patents*, April 29, 2014, C(2014) 2892 final, at § 269.

The most important development with respect to the compatibility of the use of injunctions to enforce SEPs emerged from the decision of the Düsseldorf patent court on 21 March 2013 to refer several questions to the CJEU, which arose in the context of a patent infringement action initiated by Huawei against its Chinese rival ZTE. In its response to the questions raised by the referring court, the CJEU, in its judgment of July 2015, developed a framework outlining the circumstances under which an SEP holder could seek an injunction against a standard implementer to enforce its patents without breaching Article 102 TFEU.¹¹ A significant feature of this framework is that it does not only place obligations on the SEP holder if it wants to be able to seek an injunction with breaching EU competition law, but also on the standard implementer if it wants to avoid being subject to a legally admissible injunction. The CJEU thus seeks to reduce the risks of both “hold-up” and “hold-out.”¹²

The CJEU provides that, in order not to breach Article 102 TFEU, a SEP holder which considers that its patent has been infringed can only bring an action for an injunction provided that prior to bringing such an action, it has alerted the alleged infringer of the SEP “by designating that SEP and specifying the way in which it has been infringed.”¹³ Once the alleged infringer has expressed its willingness to take a FRAND license, the SEP holder must present a written offer for a license on FRAND terms, specifying the amount of the sought royalty and the way in which that royalty is to be calculated.¹⁴ Then, the alleged infringer must respond to that offer diligently and in accordance with “recognised commercial practices in the field and in good faith.”¹⁵ If the alleged infringer decides not to accept the offer made to it, it may argue that the injunction is abusive only if it has submitted to the SEP holder, “promptly and in writing, a specific counter-offer that corresponds to FRAND terms.”¹⁶ In addition, the court notes that if the alleged infringer is practicing the SEP before a license has been formally concluded, it must, from the point at which its counter-offer is rejected, “provide appropriate security, in accordance with recognised commercial practices in the field, for example by providing a bank guarantee or by placing the amounts necessary on deposit.”¹⁷ Finally, in the absence of an agreement on the details of the FRAND terms following the counter-offer by the alleged infringer, “the parties may, by common agreement, request that the amount of the royalty be determined by an independent third party, by decision without delay.”¹⁸

Following the adoption by the CJEU of its *Huawei v. ZTE*, we could have hoped that now that the most contentious SEP licensing issue, i.e. the alleged use of injunctions to extract unreasonably high royalty fees from willing licensees, had been addressed as a proper licensing framework outlining the respective rights and obligations of SEP holders and implementers was in place, SEP licensing disputes would abate. This is not what happened, however, for several reasons.

First, a weakness of the *Huawei v. ZTE* framework is that it does not provide a solution when the SEP holder has made an offer and the standard implementer has made a counter-offer, and they are still unable to agree on the terms and conditions of the license. In that situation, the CJEU simply says that the parties “may” by common agreement request that the amount of the royalty be set by an independent third-party, but they are not obliged to do so. A more helpful approach would have been for the CJEU to say that in the case they are unable to agree the parties may agree to have the license terms by an arbitral tribunal or a court and, if they are unable to reach such an agreement after a given period of time, that the terms will be determined by an independent third-party.¹⁹

Second, the *Huawei v. ZTE* framework was quite general in nature and contained terms that were subject to interpretation. The exact meaning of each and every step of the CJEU’s framework has thus been litigated in national courts, which in some cases adopted inconsistent positions. For instance, one question that has arisen in litigation is whether the *Huawei v. ZTE* licensing framework is a “step-by-step” or a “cumulative” process. Following a step-by-step approach, as long as one of the parties does not fulfil one of its obligations (e.g. the SEP holder did not submit a FRAND offer), the other party does not have to fulfil its obligations under the next step (e.g. the implementer does not have to

11 C-170/13, *Huawei v. ZTE*, ECLI:EU:C:2015:477.

12 On hold ups and hold outs, see Colleen V. Chien, “Holding Up and Holding Out,” 21 (2014) *Mich. Telecomm. & Tech. L. Rev.* 1.

13 C-170/13, *Huawei v. ZTE*, *supra* note 11, at § 61.

14 *Id.* at § 63.

15 *Id.* at § 65.

16 *Id.* at § 66.

17 *Id.* at § 67.

18 *Id.* at § 68.

19 This was the approach pursued in the Samsung commitments, see *supra* note 9.

submit a counter-offer).²⁰ Following a cumulative approach, even if one of the parties has not fulfilled one of its obligations, the other should nevertheless fulfil its own obligations under the *Huawei v. ZTE* licensing framework.²¹ The German case-law is divided on this issue and a clear position has yet to emerge.

Third, because a preliminary ruling of the CJEU only responds to the questions raised by the domestic referring court, the *Huawei v. ZTE* decision does not say anything about a series of important issues, such as for instance the scope of a FRAND license. For instance, should an SEP holder be able to condition the granting of a license to the implementer's acceptance to take a global portfolio license? As we will see, this issue was at the core of the *Unwired Planet v. Huawei* High Court and Court of Appeals judgments in the UK.²² Moreover, the *Huawei v. ZTE* judgment – and for that matter earlier Commission decisions – do not say anything about the way FRAND royalties should be calculated, and this remains a contentious issue in SEP licensing negotiations and litigation.

Fourth, with the advent of the Internet of Things (“IoT”), some SEP licensing issues become more prominent. For instance, as illustrated by the licensing dispute between Nokia and Daimler,²³ a particularly contentious issue is whether an SEP holder should be free to choose the level of the value chain where it licenses its SEP portfolio (for instance, the end product level), or whether it should be bound by its FRAND commitment and/or its obligations under EU competition law to grant a FRAND license to all implementers (including, for instance, component makers) seeking a SEP license.

In sum, the decisions as well as the soft law instruments adopted by the Commission over the past two decades combined with the CJEU's judgment in *Huawei v. ZTE* have addressed some important issues that arise in the context of SEP licensing, such as the risk of patent ambush and the risk that the unrestrained use of injunctions may be used by SEP holders to force SEP implementers to take licenses at non-FRAND terms, many issues still need to be resolved, as will be shown in Part III below.

III. SEP LICENSING AND EU COMPETITION LAW: SOME IMPORTANT ISSUES IN NEED TO BE SOLVED

In this Part, I focus on some of important SEP licensing-related issues that have not yet received a satisfactory resolution. In each case, I describe the question at stake, the status of the debate and some possible solutions.

A. What is the Nature of the FRAND Commitment?

Although this is a rather basic question, there is still no consensus on the legal nature of the FRAND commitment. On the one hand, it can be argued that FRAND has a contractual nature and that therefore a breach of a FRAND commitment amounts to a breach of contract. This position, which I believed is correct, has received support from UK and U.S. courts.²⁴ On the other hand, German courts have so far refused to accept the contractual nature of FRAND, preferring instead to accommodate competition law defenses of SEP implementers.²⁵

²⁰ In support of this position, see, e.g. OLG Düsseldorf, *Sisvel v. Haier*, judgments I-15 U 65/15 and I-15 U 66/15 of January 13, 2016 (it is only an offer of the patentee that meets FRAND conditions that triggers the infringer's obligations; if the patentee's offer was not FRAND, the (potential) infringer would not have to react upon this offer); OLG Karlsruhe, *Pioneer v. Acer*, judgment 6 U 55/16 of May 31, 2016 (only a FRAND offer can trigger the obligation by the alleged infringer to make a FRAND counteroffer).

²¹ In support of this position, see, e.g. OLG Düsseldorf, *St. Lawrence v. Vodafone and HTC*, judgments I-15 U 35/16 and I-15 U 36/16 of May 9, 2016 (a willing SEP implementer always has the chance to comply with its obligations during the case and thereby avoid an injunction depending on the details of the case; a rectification of any omission should be possible during the proceedings); OLG Düsseldorf, *Sisvel v. Haier*, judgments I-15 U 65/15 and 4a O 144/14 of March 30, 2017 (the non-timely taking of a necessary step by a party, which it is obligated to take according to the licensing framework established by the ECJ, does not result in a so-called material preclusion. This means that the respective step may be, in any event, still taken before an action has been filed without this strongly impairing the material legal position of the inert party).

²² See Part III, Section D below.

²³ See *infra* Part III, Section E below.

²⁴ See, e.g. *Microsoft Corp. v. Motorola Inc.*, 696 F.3d 872 (2012); High Court of Justice, *Unwired Planet v. Huawei*, [2017] EWHC 711 (Pat.), at §§ 140 *et seq.*

²⁵ See Haris Tsilikas, *Antitrust Enforcement and Standard Essential Patents*, Nomos, 2015, at p. 32.

The view that the FRAND commitment is of a contractual nature is based on French contract law.²⁶ As the European Telecommunications Standards Institute (“ETSI”) is based in Nice, France, its IPR policy, including the “irrevocable undertaking in writing . . . to grant irrevocable licences on fair, reasonable and non-discriminatory (“FRAND”) terms and conditions” that a company that has declared SEPs is invited to give as per Article 6 of that Policy, is governed by French law. French law experts have recognized that, according to French contract law, the FRAND commitment is a “*stipulation pour autrui*,” i.e. a covenant that benefits third parties, in this case all companies that implement the SEPs in question.²⁷

This issue has recently come to the fore as the Tribunal Judiciaire de Paris (“Paris High Court”), has been asked to look into this issue by TCL, a Chinese company active in consumer electronics.²⁸ The background of this case is as follows. In 2015, Philips approached TCL to invite it to take a license for Philips’ portfolio of 3G and 4G SEPs. As no agreement could be reached, Philips sued TCL for its UK SEPs before the High Court of England & Wales, requesting an injunction to put an end to the infringement. In February 2019, TCL filed a lawsuit before the Paris High Court seeking, *inter alia*, to enjoin Philips to grant a license on FRAND terms, which the court had jurisdiction to determine, as well as to enjoin ETSI to assist with the granting of the license. In July 2019, Philips filed a motion to dismiss before the case management judge arguing *inter alia* that the Paris High Court lacked jurisdiction to hear the claims brought against Philips. On February 6, 2020, the case management judge rejected Philips’ motion to dismiss.²⁹

Although this judgment is only of a procedural nature, it is important for several reasons. First, the case management judge’s rejection of Philips’ motion to dismiss means that the Paris High Court will have to look into the substance of the matter, including whether FRAND is of a contractual nature. Indeed, TCL, but also ETSI, argued, in line with the position of leading French law experts, that the FRAND commitment amounted to a *stipulation pour autrui*, which was the result of an exchange of consent between a promisor (in this case, Philips) and a stipulator (ETSI) where the promisor irrevocably undertook to grant irrevocable FRAND licenses to one or more beneficiaries (in this case, TCL).³⁰ Philips rejected this view, arguing that that it was only bound by a non-contractual commitment to negotiate in good faith.

The Paris High Court trial, which is expected to take place in a few months, thus represents a unique opportunity to clarify the nature of the FRAND commitment. Should the Paris High Court confirm that FRAND has a contractual nature, this could have repercussions beyond France. Considering that ETSI’s IPR policy must be interpreted under French law, it would in my view become increasingly difficult for courts, for instance in Germany, to reject the contractual nature of FRAND.

B. What is a FRAND License?

One of the reasons why SEP licensing has generated so many disputes is because the FRAND commitment that SEP holders make to standard-setting organizations is inherently vague. Of course, much more is known about FRAND today than it was 10 or 15 years ago. First, there is a large amount of legal and economic literature explaining the nature and contours of that notion, although it often goes in direct direction.³¹ Moreover, several courts have determined FRAND rates and thus clarified the methodologies that can be used in performing that exercise. But more work needs to be done to increase consensus over what FRAND terms mean in practice.

26 See ETSI Intellectual Property Rights Policy, available at <https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf>, at Article 12.

27 See, e.g. the testimony of Professor Fauvarque-Cosson in *Unwired Planet v. Huawei*, *supra* note 24, at §§ 106 *et seq.*

28 Florian Müller, “French court may hold ETSI FRAND declarations to be binding contracts to the benefit of third parties: cross-jurisdictional ramifications,” February 21, 2020, available at www.fosspatents.com/2020/02/french-court-may-hold-etsi-frand.html.

29 See Ordonnance du juge de la mise en état, N° RG 19/02085, February 6, 2020, available at https://www.scribd.com/document/448263102/20-02-06-TJP-Order-in-TCL-v-Philips-and-ETSI#from_embed.

30 See Marianne Schaffner & Christophe Arfan, “FRAND undertakings: a long awaited legal qualification in Europe – Paris takes the lead,” available at <https://www.reedsmith.com/en/perspectives/2020/02/frand-undertakings-a-long-awaited-legal-qualification-in-europe>.

31 The question of the meaning of the terms “fair” and “reasonable” contained in the FRAND promise has absorbed the attention of legal and economic commentators in the last few years. See, e.g. Daniel Swanson & William Baumol, “Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power,” (2005) 73 Antitrust Law Journal 1; Damien Geradin & Miguel Rato, “Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-up, Royalty-Stacking and the Meaning of FRAND,” (2007) 3 European Competition Law Journal, 101; Mario Mariniello, “Fair, Reasonable and Non-Discriminatory (FRAND) Terms: A Challenge for Competition Authorities,” 7 (2011) Journal of Competition Law and Economics 523; Dennis W. Carlton & Allan Shampine, “An Economic Interpretation of FRAND” 9 (2013) Journal of Competition Law and Economics 531. Most of the literature does not distinguish between “fair” and “reasonable,” in part due to the fact that the term “fair” is specific to the EU context (U.S.-based SSOs tend to refer to the concept of RAND as one variant, not FRAND).

1. What is fair and reasonable?

A common approach to determine a fair and reasonable royalty rate is the comparable licenses approach. This approach investigates the rates agreed to in other licenses that are comparable to the one in dispute. Courts have endorsed the comparable licenses methodology as a standard methodology used in valuing SEPs. For instance, in *Microsoft v. Motorola*,³² Judge Robart noted that a comparable contracts approach was the preferable approach to pursue. Likewise, in *TCL v. Ericsson*,³³ Judge Selna utilized a comparable contracts analysis as part of its assessment of the FRAND rate, although he also relied quite heavily on a top-down approach to inform the fair and reasonable rate.

There are two main challenges with this approach. First, comparable licenses may not necessarily be available, either because the SEP holder has not concluded any license yet or because earlier licenses are too different from the circumstances at play. Their informative value is therefore limited. There are also circumstances where some parties may argue that they cannot provide comparable licenses due to confidentiality reasons, although in most instances this difficulty can be overcome through confidentiality rings, whereby the parties agree that only specified persons (e.g. outside counsel and consultants) can access these documents. In recent judgments, German courts have also rejected claims by SEP holders that they could not provide comparable licenses, as the courts considered such licenses were needed to ensure that the terms offered are fair and reasonable.³⁴

Second, even when comparable licenses are available, they can differ from the focal agreement in several dimensions, such as (i) the type of contract: some licenses are one-way whether others are cross-licenses; (ii) the date of signing and the SEPs that are licensed (as patent portfolios can grow or shrink over time); (iii) the identity of the licensor and licensee, and the extent of the relationship between the two; (iv) the duration and scope of the license; (v) payment terms (some contracts may contain lump-sum amounts, while others may contain royalties that are based on the sales of the licensee); and (vi) non-monetary considerations explicitly or implicitly included as part of the contract (for instance, some licenses may be part of a broader cooperation between the parties); etc. While the presence of differences add complexity to the methodology, various economic techniques can be used “unpack” these differences and determine the “effective” (i.e. all things being equal) royalty rates agreed in each comparable license.

Thus, the use of comparative licenses is an effective means to determine fair and reasonable royalties, and attempts made by SEP holders not to provide comparable licenses when such licenses are available should be seen suspiciously. In the absence of comparable licenses, litigants and courts can rely on the top down methodology discussed below. But even when comparable licenses are available nothing prevent litigants and courts to combine these different methodologies to determine fair and reasonable rates. Given the fact that there is no “silver bullet” solution to the determination of fair and reasonable rates, the combination of methods makes sense.

The top-down approach considers what portion of the value of a standard-compliant product is attributable to the technologies that make up the standard, and, among this portion, how the value should be distributed to the contributors of those technologies. This approach has been used in SEP FRAND rate disputes on a number of occasions, although the precise way in which it was pursued varied in practice.

- The first step of this approach consists in determining the aggregate royalty that should be used to compensate all SEP holders. In *TCL v. Ericsson*, Judge Selna reviewed public statements made on the appropriate magnitude of the aggregate royalty rate by patent holders before the standard was adopted.³⁵
- The second step is to apportion this aggregate royalty amongst the SEP holders on the basis of the relative strength and coverage of their portfolios. As a first step, the relative strength and coverage of a given portfolio can be assessed based on its share of the total number of patents considered to be essential to the standard. Instead of analyzing the essentiality of each patent declared essential, experts from the parties can sample a certain percentage of the patents at stake. Additional methodologies can then be used to as-

³² *Microsoft Corp. v. Motorola, Inc.*, 864 F. Supp. 2d 1023, 1031 (W.D. Wash. 2012).

³³ *TCL Comm. Technology Holdings Ltd. v. Telefonaktiebolaget LM Ericsson*, et al., No. 8:14-cv-341 (C.D. Cal. 2017).

³⁴ In OLG Düsseldorf, Decision 4c O 81/17, *Intellectual Ventures v. Vodafone*, the Court pointed out that a comparable license agreement signed by IV with a third party should not be kept as secret, since FRAND commitment contained the request of transparency. If the SEP holder does not provide the comparable license agreements, the SEP implementer could not know if the offer is FRAND, especially that it is not discriminatory). In LG Düsseldorf, Decision 4c O 72/17, *Intellectual Ventures v. Deutsche Telekom/Vodafone/Telefonica*, the court indicated that comparable agreements (if any) should be showed to the licensee.

³⁵ *TCL Comm. Technology Holdings Ltd. v. Telefonaktiebolaget LM Ericsson*, *supra* note 33.

sess the relative strength of a portfolio, such as testimonies from technical experts, citation and/or contribution analysis, etc.³⁶ Which methodology or combination of methodologies should be relied on depends on the circumstances of each case.

As a result of this approach, if the aggregate royalty is, for instance, 5 percent of the sales price of a given device and the relative strength of a given firm's portfolio is 20 percent, the firm owning that portfolio should be allowed to charge a fair and reasonable rate of no more than 1 percent of the sales price of that device.

The top-down methodology has thus several advantages. First, it caps the cumulative royalty rate at a reasonable level and thus prevents royalty stacking. The difficulty is of course to determine what the aggregate royalty rate should be, especially in the absence of public pronouncements from relevant firms on the subject. As there is no silver bullet approach to this issue, the best courts can do is to consider a variety of information points before settling on a number. Third, when allocating this aggregate rate, it takes into account not only the number of SEPs (which may be a poor indicator of the value of an SEP portfolio), but also the strength of the portfolio based on a variety of factors.³⁷

Thus, while there is no perfect solution to determine how to determine fair and reasonable rates, a combination of methods will usually help courts to come to the determination of such rates.

2. What is non-discriminatory?

In a paper on the economic interpretation of FRAND, Dennis Carlton and Alan Shampine discuss what non-discrimination means in the FRAND context:

'Non-discriminatory,' in the context of a SSO setting standards for competing firms, can be interpreted to mean that all implementers of the standard should be offered licenses to the technology, and all 'similarly situated' firms should pay the same royalty rate.³⁸

While this approach is certainly correct, some have, mistakenly in my view, adopted a more relaxed interpretation of the concept of non-discrimination. In its *Huawei v. Planet* judgment, which will be discussed further in section C below, Birss J. for instance made a distinction between what he refers to as "hard-edged" discrimination, whereby all similarly-situated licensees have to pay the same royalty rates and "general" discrimination, where non-discrimination is "determined primarily by reference to the value of the patents being licensed."³⁹ According to Birss J., the principle of non-discrimination contained in FRAND would be met as long as the royalty rate offered by the SEP holder reflects the intrinsic value of its portfolio. Although this is not entirely clear, this seems to suggest that provided that the royalty rate is fair and reasonable, it will automatically be non-discriminatory as well.

While this approach has been affirmed by the Court of Appeal, it is plainly wrong. First, it finds no support in case-law or in the literature. It also seems counter-intuitive, as it is hard to understand why the FRAND commitment would have a "ND" component if the analysis was exclusively centered on the fairness and reasonableness of the SEP holder offer. As far as the EU is concerned, this approach is not in keeping with the requirements of Article 102(c) TFEU, which is generally understood as requiring that similarly situated licensees benefit from similar licensing terms.⁴⁰

Thus, what a correct interpretation of the non-discriminatory requirement in FRAND means is that "similarly-situated" licensees (e.g. licensees that implement the SEPs in question in products affected to the same use) should be treated similarly. By contrast, different licensing

36 For instance, economists regularly use "forward citations" as an indication of a patent's value. See, e.g. Forward citation analysis is a method used to assess relative patent value by examining the number of times a patent is cited as "prior art" by a later patent. Nathan Falk & Kenneth Train, "Patent Valuation with Forecasts of Forward Citations," February 2016, available at eml.berkeley.edu/~train/patents.pdf; Dietmar Harhoff, et al., "Citation Frequency and the Value of Patented Inventions," 81 (1999) *Review of Economics and Statistics* 511.

37 Economic research has shown that in the IT industry the distribution of value among patents is highly skewed, i.e. most of the value is concentrated in a small number of patents (i.e. the top 1-5 percent). On this issue, see Mark Shankerman, "How Valuable is Patent Protection? Estimates by Technology Field," 29 (1998) *Rand Journal of Economics* 77.

38 Dennis Carlton & Allan L. Shampine, "An Economic Interpretation of FRAND," 9(3) *Journal of Competition Law & Economics*, 531, 546.

39 *Unwired Planet v. Huawei*, *supra* note 24, at §§ 341 *et seq.*

40 See Damien Geradin et al., *EU Competition Law and Economics*, OUP, 2012, at Sections 4.452 *et seq.* and the case-law cited there.

terms may apply for the same SEP portfolio are implemented by implementers that are not similarly situated (e.g. because they produce products that are not affected to the same use). This issue will be further discussed in Section F below.

C. Should the Gaps left by the CJEU in *Huawei v. ZTE* be Filled, and if so, How?

As noted above, while the CJEU established a licensing framework establishing some principles that SEP holders need to comply with in order to be able to seek an injunction to enforce patents without breaching Article 102 TFEU, as well as principles that SEP implementers should follow if they want to avoid being subject to an injunction, the truth of the matter is that the CJEU left many issues open.

It is of course clear that the role of the CJEU was not to “regulate” the use of injunctions and that national patent courts should conserve a margin of appreciation allowing for both flexibility and experimentation. But, on the other hand, even within a single Member State such as Germany, there is a large degree of fragmentation – and in some cases significant inconsistencies – in the way courts have applied *Huawei v. ZTE*. This encourages forum shopping and legal uncertainty. Of course, within a country, higher courts can unify the case-law by tackling once and for all a contentious issue. But inconsistencies may then still exist between Member States, hence maintaining forum shopping incentives.

That leaves us with a limited number of options. One option would be for national courts to return to the CJEU through the preliminary procedure to ask it to clarify further some contentious questions. While the CJEU has a duty to answer the questions that it has been asked by a national court, the CJEU is unlikely to see its role as an “injunction regulator” and prescribe a detailed licensing framework. The boundaries of the ability of SEP holders to seek injunctions for enforcement of their SEPs may also be further defined by the Commission through competition decisions or through soft law instruments, but once again no set of rules or principles will cover every possible eventuality that may arise in the context of SEP licensing negotiations or litigation. Thus, while further guidance from the EU institutions may be held, one should hope that greater harmony and consistency will be progressively achieved by a combination of higher court decisions consolidating the case-law of lower courts, as well as a growing consensus amongst courts over best practices.

Considering the high volume of SEP litigation taking place in Germany and the tendency of German courts to grant injunctions even when SEPs are involved, it is also important to note that question marks have been raised about the compatibility of the approaches taken by German courts with the proportionality principle enshrined in the EU IP Enforcement Directive.⁴¹ While there are expectations that the German government would address this issue through its patent “reform” bill, the recently released draft of this bill, and in particular its amendment of § 139 of the Patent Act, has been criticized for being “*designed only to cement the status quo on injunctions.*”⁴² Although it is too early to tell how the final version of the reform bill will look like on the issue of proportionality, an increased consideration of proportionality by German courts would lead to greater alignment with other EU Member State patent courts where this principle is typically given greater consideration.

As a final point, we note the attempts of some SEP implementers sued for patent infringement (or more generally involved in SEP infringement lawsuits) before European courts to block the granting of injunctions by such courts by filing anti-injunction lawsuits in the United States. Such attempts have, however, so far failed. For instance, the Munich Regional Court issued what could be labelled an “anti-anti suit injunction” in proceedings between Nokia and Daimler, following an attempt by Continental, a Daimler part supplier that is an intervener in the Munich proceedings, to have the Northern District Court of California – where it has filed a lawsuit against Nokia – to stop Nokia via an anti-injunction lawsuit from seeking an injunction against Daimler in the Munich Court.⁴³ Similarly, both the Paris High Court and High Court of England & Wales granted anti-anti injunctions against Lenovo. The Paris High Court demanded that Lenovo withdraw the anti-injunction lawsuit it had filed in the Northern District Court of California,⁴⁴ and imposed a €200,000 daily penalty payment should it fail to do so.⁴⁵ The High Court of England and Wales also

41 See, e.g. Maurits Dolmans, “We need proportionality review for patent injunctions under German law,” presentation made at Conference on Component-Level Licensing, November 2019 12, Brussels, referred to by Florian Müller in “German patent reform discussed at Brussels conference: automatic injunctions contravene EU law,” November 18, 2019, available at www.fosspatents.com/2019/11/german-patent-reform-discussed-at.html.

42 See Florian Müller, “German ministry of justice outlines patent “reform” bill: thick but void smokescreen, designed only to cement the status quo on injunctions,” January 15, 2020, available at www.fosspatents.com/2020/01/german-ministry-of-justice-outlines.html.

43 See Munich I District Court, Nokia, case ID: 21 O 9333/19, July 11, 2019. For a discussion, see Florian Müller, Nokia persuades Munich court to issue anti-antisuit injunction against Daimler supplier Continental, pre-empting decision by Judge Koh, July 30, 2019, available at www.fosspatents.com/2019/07/nokia-persuades-munich-court-to-issue.html.

44 *Lenovo (United States) Inc. v. ICom GmbH & Co., KG* (5:19-cv-01389) District Court, N.D. California.

45 Paris Court of First Instance, *IPCom v. Lenovo*, case no RG 19/59311. For an analysis, see Enrico Bonadio & Luke McDonagh, “Paris Court Grants a Sep Anti-Anti-Suit Injunction in *IPCom v. Lenovo*: A Worrying Decision in Uncertain Times?,” January 9, 2020, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3505849.

granted an anti-anti injunction, but limited itself to denying Lenovo UK the right of action against IPCOM in the U.S..⁴⁶

D. Can a Court that Finds that Local SEPs Have Been Infringed Force the Infringer to take a Global License on Pain of an Injunction?

An important question is whether, other than by agreement between the parties, a patent court that has found that an SEP granted in its jurisdiction (e.g. a German or a UK SEP) has been infringed should be allowed to grant an injunction against the infringer unless it takes a global license at terms and conditions set by the court itself.

That question arose in the *Unwired Planet v. Huawei* UK case.⁴⁷ In that case, the High Court (Birss J.), once having found that Huawei had breached Unwired Planet UK SEPs, granted an injunction restraining the infringement of that patent unless Huawei agreed to enter into a global license (i.e. a license that covered not only the UK SEPs, but also those granted in other jurisdictions despite the fact that they cannot be adjudicated in the UK) at royalty rates set by the High Court itself.

The main arguments used by Birss J. to justify this unconventional approach are summarized as follows. First, he observed that worldwide portfolio SEP licenses are common in the industry.⁴⁸ Second, he considered that a willing licensor (with a sufficiently large and sufficiently wide geographical scope portfolio) and a willing licensee with more or less global sales negotiating a FRAND licensee would agree on a worldwide license. They would indeed regard country by country licensing as “madness,” according to Birss J., as a “worldwide licence would be far more efficient.”⁴⁹ In his view, the real inefficiency of country by country licensing is “the effort required to negotiate and agree so many different licences and then to keep track of so many different royalty calculations and payments.”⁵⁰ Finally, Birss J. found that a FRAND license should not prevent a licensee from challenging the validity or essentiality of licensed patents and should have provisions dealing with sales in non-patent countries.⁵¹ Thus, for instance, if the German court where Unwired Planet also sued Huawei found that all the German patents were invalid (or not essential), that would simply result in whatever consequences the worldwide license provided for.

Huawei appealed this part of the High Court judgment to the Court of Appeals,⁵² which confirmed Birss J.’s approach. Huawei has furthered the Court Appeals’ judgment to the Supreme Court.⁵³ At the time of writing, the Supreme Court has not handed down yet its decision.⁵⁴

I believe that Birss J.’s decision to force Huawei to take a global license to Unwired Planet’s SEPs is wrong for several fundamental reasons, most of which were pointed by Huawei in its appeal of this decision.

⁴⁶ Peter Ling, Paris “Court Grants Anti-Anti-Suit Injunction in IPCOM v. Lenovo,” December 2, 2019, *IPKat*, available at ipkitten.blogspot.com/2019/12/paris-court-grants-anti-anti-suit.html ; Christina Schulze, Paris and London courts award anti-anti-suit injunction, *Juve*, November 11, 2019, available at <https://www.juve-patent.com/news-and-stories/cases/paris-and-london-courts-award-anti-anti-suit-injunction/>.

⁴⁷ *Unwired Planet v. Huawei*, *supra* note 24.

⁴⁸ *Id.* at § 534.

⁴⁹ *Id.* at § 543.

⁵⁰ *Id.* at § 544.

⁵¹ *Id.* at § 567.

⁵² *Unwired Planet v. Huawei*, Court of Appeals (Civil Division), [2018] EWCA Civ 2344.

⁵³ *Unwired Planet International Ltd and another (Respondents) v. Huawei Technologies (UK) Co Ltd and another (Appellants)*, Case ID: UKSC 2018/0214 (The Court is asked to answer the following questions: 1. Does the English court have the power or jurisdiction, or is it a proper exercise of any such power or jurisdiction without the parties’ agreement: to grant an injunction restraining infringement of a UK SEP unless the defendant enters into a global license under a multinational patent portfolio; to determine the rates/terms for such a license; and to declare that such rates/terms are FRAND? 2. If the answer to (i) is “yes,” is England the proper forum for such a claim in the circumstances of the *Conversant* proceedings?).

⁵⁴ The Supreme Court will also look at a twin case involving *Conversant*, an NPE, which had sued Huawei and ZTE for the infringement of its UK SEPs. It sought, by way of relief, a determination of FRAND terms for its global SEP portfolio. Huawei and ZTE challenged the jurisdiction of the High Court in relation to *Conversant*’s claim for the determination of a global FRAND license. Carr J. dismissed this challenge on jurisdiction but gave permission to appeal. *Conversant v. Huawei and ZTE*, [2018] EWHC 808 (Pat) Huawei and ZTE appealed jurisdiction to the Court of Appeal on two grounds. First, they said that the claim brought against them is not justiciable in the English court. Second, they said that the English court is not the natural or an appropriate forum for the claims against them. The Court of Appeals considered that the justiciability issue foreclosed by its judgment on the *Huawei v. Unwired Planet* case, see note 52. It also dismissed the appeal on the *forum non conveniens* issue. Court of Appeal (Civil Division), *Huawei and ZTE v. Conversant*, [2019] EWCA Civ 38. Huawei and ZTE filed a further appeal to the Supreme Court (*Huawei Technologies Co Ltd and another (Appellants) v. Conversant Wireless Licensing SARL (Respondent)*, Case ID: UKSC 2019/0041) raising the same issue as the appeal raised by *Huawei v. Unwired Planet* cited at note 53.

First, when Birss J. observes that worldwide portfolio SEP licenses are common in the industry and that a willing licensor and a willing licensee negotiating a FRAND license would agree on a worldwide license, he confuses what it is appropriate for parties to do *with* consent with what it is appropriate for a court to do *without* the parties' consent. In other words, it is not because the parties may conclude a global portfolio license following bilateral negotiations or may agree to entrust a court to settle a licensing dispute by setting the terms and conditions of a global license that it necessarily means that a patent court should arrogate to itself the right to perform a similar mission.

Second, Birss J.'s suggestion that, but for its willingness to coerce Huawei to take a global license, Unwired Planet would have to enforce its SEPs on a country-by-country basis is not supported by any empirical evidence. What happens in the context of global SEP licensing dispute is that the SEP holder will sue the infringer in a few major jurisdictions – where the devices are manufactured and where the bulk of the sales take place, e.g. Germany, UK, the United States and China – and then depending on the outcome of the lawsuits filed by the SEP holder in these jurisdictions, the parties will bring the matter to a global or regional resolution.

Third, Birss J. invokes no valid reason why he should be allowed to alter the territorial nature of IP rights. Non-UK patents whose validity is disputed in other jurisdictions (in the *Unwired Planet* case in Germany and China) are not justiciable before an English patent court. For obvious reasons, the validity, essentiality and other features of these disputed patents should be determined by the courts of the granting jurisdiction. What Birss J. effectively did was to *presume* that Unwired Planet's non-UK patents were valid and infringed, while there was no material element suggesting that this was the case.

Fourth, Birss J.'s approach does not accord with the Commission's *Motorola* decision where the Commission endorsed an SEP licence covering the territory of Germany as being FRAND,⁵⁵ and the rejection by the Court of Appeals of this argument on the ground that the Commission had subsequently modified its position in its Communication setting out the EU approach to Standard Essential Patents⁵⁶ is totally unfounded. In that Communication, which is not binding, the Commission merely states, citing the High Court judgment, that “a country-by-country licensing approach may not be efficient and may not be in line with a recognised commercial practice in the sector.”⁵⁷ While it is entirely true that SEP licenses are often concluded on a global basis with the consent of the parties, the above quote nowhere suggests that a patent court should be allowed to coerce an SEP implementer to take a global license at terms it sets without the consent of both parties to the dispute.

Fifth, even if it was acceptable for a patent court to grant an injunction for the breach of SEPs granted in its jurisdiction unless the infringer takes a global license at rates set by that court, it is hard to see why in the *Unwired Planet* case an English court was the appropriate forum to perform that mission. After all, in this case Huawei's devices were not produced in the UK and only a tiny amount of Huawei's global sales were made in the UK while over half of such sales were made in China.

Finally, the approach followed by the High Court is likely to stimulate “forum shopping.” Unless there is a reason to suggest that English courts are in a special position, which is clearly not the case, any court in the world could decide to force the SEP implementer to agree to a global license on the sole ground that it has breached a single SEP granted in its own jurisdiction. This would trigger a race to the jurisdiction that is the most favorable to the SEP holder, even if no devices are manufactured there and sales are very small.

Thus, it is to be hoped that the Supreme Court will strike down the approach pursued by Birss J. in *Unwired Planet* and that patent courts in other jurisdictions will not try to replicate it.

E. Access for All v. License to All: What are the Obligations of the SEP Holder?

One of the most hotly debated questions with respect to SEP licensing is whether, as a result of their FRAND commitment (or their obligations under EU competition law), SEP holders are under an obligation to grant FRAND licenses to all manufacturers implementing their patents or whether they can select the level of the supply chain at which their will grant a FRAND license.

There are different schools of thought on this issue. Proponents of the “access for all” approach consider that the FRAND declaration is not a requirement for licensing to all parties using standard technology; it is rather a mechanism to ensure that those who want to use standard

⁵⁵ See *Motorola*, *supra* note 10.

⁵⁶ Setting out the EU approach to Standard Essential Patents, Brussels, November 29, 2017, COM(2017) 712 final.

⁵⁷ *Id.* p. 7.

technology can access that technology. By contrast, proponents to the “license to all” approach claim that rights holders must license all entities wishing to obtain licenses regardless of the level in the supply chain.⁵⁸

The arguments advanced by the proponents of these approaches are well-known. On the one hand, proponents of the “access for all” approach argue that SEP holders should be free to license their patents only to end-product manufacturers. They will typically invoke the fact that SEPs have been traditionally licensed at the end-product level, citing the example of mobile communication devices. They will also argue that licensing at the end-product level reduces transaction costs as all relevant SEPs are implemented in the end-product, whereas components may only implement some of the SEPs. Another argument often advanced to support licensing at the end-product level is that it facilitates monitoring the sales of licensed products and royalty payments. Finally, some have argued that a “license to all” approach would harm innovators as it would effectively impose a revenue cap and drive the royalties downwards.⁵⁹

On the other hand, proponents of the “license to all” approach often consider that components (e.g. modems) best reflect the value of standardized technology and that therefore SEPs should be licensed at the component level. The underlying assumption is that most wireless SEPs are implemented at the component level, and that component suppliers are the logical counterparts in licensing negotiations.⁶⁰ By contrast, licensing at the end-product level would allow SEP holders to capture the value created by other components (e.g. cameras in mobile devices) or technologies that are unrelated to the mobile communication SEPs (e.g. software that relates to the operating system, etc.). Another line of argument is that while manufacturers of mobile communication devices have significant knowledge of mobile communication technologies, it is not the case with respect manufacturers of other connected products, such as for instance car manufacturers. Moreover, while licensing at the end product level is common practice in the mobile device industry, that is not the case in the vehicle manufacturing industry where OEMs typically expect to be delivered components that are free of third-party rights.⁶¹

The tensions between the “access for all” v. “license to all” approaches are perfectly illustrated by the licensing dispute between, on the one hand, Nokia and, on the other hand, Daimler and some of its component suppliers. While Nokia has pushed for Daimler (and other vehicle manufacturers) to take a license, Daimler has been reluctant to do so for the reason that, in the vehicle manufacturing industry, component suppliers are expected to deliver their parts free of third-party rights. This results from the facts that cars are made of thousands of parts supplied by a large number of component makers. Hence, it would be a huge burden for companies like Daimler to negotiate licenses for all technologies, standardized or not, that are embedded in their cars. On the other hand, component suppliers are anxious to obtain a FRAND license as, without such license, they cannot lawfully produce and sell their parts.

In November 2018, Daimler, subsequently joined by some component suppliers, filed a complaint with DG Competition against Nokia on the ground that by refusing to license its 2G/3G/4G standard essential patents to suppliers of standard-compliant components for automotive vehicles Nokia has breached Article 102 TFEU.⁶² In April 2019, Nokia filed ten patent lawsuits at the regional courts of Düsseldorf, Mannheim and Munich. Specifically, Nokia filed four lawsuits with the Regional Court Mannheim, to be heard by the 2nd Civil Chamber. The Regional Court Düsseldorf (Civil Chamber 4a and 4c) and the Regional Court Munich (Civil Chamber 21) will each hear three complaints.⁶³ At the end of 2019, Nokia engaged in mediation with Daimler and its Tier-1 suppliers in order to solve the licensing dispute.⁶⁴ The outcome of this mediation has not been made public at the time of writing, although some have suggested that it was not successful.⁶⁵

58 For a discussion of the arguments of each side, see Jean-Sébastien Borghetti et al., “FRAND Licensing Levels under EU Law,” February 2020, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3532469, at 3.

59 Axel Gautier, Nicolas Petit, “Smallest Salable Patent Practicing Unit and Component Licensing: Why 1\$ is not 1\$,” (2019) 15 *Journal of Competition Law & Economics* 690.

60 See Borghetti et al, *supra* note 58, at 3.

61 Tim Pohlmann, “Patent and Standards in the auto industry,” March 31, 2017, available at <https://www.iam-media.com/frandseps/patents-and-standards-auto-industry>.

62 See Foo Yun Chee, “Daimler asks EU antitrust regulators to probe Nokia patents,” *Reuters*, 29 March 2019, available at <https://www.reuters.com/article/us-eu-daimler-nokia-patents/daimler-asks-eu-antitrust-regulators-to-probe-nokia-patents-idUSKCN1RA2KF>.

63 Mathieu Klos, “Daimler faces next connected cars dispute,” April 11, 2019, *Juve*, available at <https://www.juve-patent.com/news-and-stories/cases/daimler-faces-next-connected-cars-dispute/>.

64 Foo Yun Chee, “Nokia, Daimler, others agreed to mediation to resolve licensing dispute,” *Reuters*, December 12, 2019, available at <https://www.reuters.com/article/us-eu-antitrust-nokia-daimler/nokia-daimler-others-agreed-to-mediation-to-resolve-licensing-dispute-idUSKBN1YG1CK>.

65 Florian Mueller, “Nokia makes antitrust mediation with Daimler and automotive suppliers over standard-essential patent licensing fail,” *Foss Patents*, January 12, 2020, available at www.fosspatents.com/2020/01/breaking-news-nokia-makes-antitrust.html.

While Nokia insists that mobile communication SEPs have so far been licensed at the end-product level and advances several reasons why it should be free to do so, it is important to understand the automotive supply-chain before taking position on this issue.⁶⁶ Automotive OEMs purchase their parts from “Tier-1” suppliers who produce component parts. Tier-1 suppliers in turn purchase the components they need to manufacture their parts from “Tier-2” suppliers. Tier-2 suppliers may in turn supply their own components from “Tier-3” suppliers and so on. As far as connectivity solutions are concerned, OEMs will buy telematic control units (“TCUs”) from Tier-1 suppliers. These TCUs comprise network access devices (“NADs”), which are either produced in-house by TCU makers or acquired from Tier-2 suppliers. NADs in turn comprise modems (comprising chipsets), which can also be produced in-house by TCU or NAD makers or acquired from tier-3 parties.

No one denies that Nokia should obtain fair compensation for its portfolio of SEPs. However, Nokia’s refusal to grant FRAND licenses to suppliers of connectivity solutions because it only wishes to grant such licenses to automotive OEMs raise a distinct set of issues for these OEMs and their suppliers.

The reasons why automotive OEMs are generally unwilling to take a SEP license are well known. First, as already noted above, unlike in the mobile device industry where licensing at the end-product level is common, vehicle manufacturers expect their parts to be free of third-party rights, which is unsurprising considering the extreme complexity of the automotive supply chain. Second, because their cars are comprised of thousands of parts embedding hundreds of different technologies, vehicle manufacturers have limited expertise with mobile communication technologies unlike their suppliers of connectivity solutions. Third, because of their “just-in-time” manufacturing processes, car manufacturers are extremely sensitive to supply disruptions and thus court injunctions.⁶⁷ By accepting to take FRAND licenses from Nokia, Daimler and other automotive, OEMs could also become the target of patent-assertion entities, which would create significant litigation exposure.

By contrast, component suppliers have very good reasons to request FRAND licenses from SEP holders. First, they need a FRAND license to lawfully make and sell their products or even to develop new standard-compliant products. By refusing to grant a FRAND license to connectivity solution suppliers, Nokia places them in a very difficult position. Second, because the extensive use of indemnification provisions contained in the supply contracts between automotive OEMs and their component suppliers, the latter may have to compensate the former for the cost of a license they have not been allowed to negotiate. This creates a situation of uncertainty whereby component suppliers are asked to manufacture and sell their products without a license, while having to compensate vehicle manufacturers or other suppliers downstream in the supply chain for the cost of that license.

Nokia’s reply to the component suppliers’ problem of having to manufacture and sell their products without a license is that licensed automotive manufacturers, by exercising “have-made rights” that would have been contractually granted by Nokia, could shield from infringement its unlicensed suppliers. Although there is some case-law on have-made rights in the United States,⁶⁸ which has been analyzed in commentaries,⁶⁹ the scope and exercise of such rights are rather unclear in Europe. In the following paragraphs, I analyze the extent to which the granting of have-made rights to automotive OEMs would grant sufficient comfort to unlicensed component suppliers.

A first issue relates to which supplier(s) would be immunized from infringement through the exercise of such have-made rights. In other words, could a licensed automotive manufacturer immunize from infringement its whole vertical supply chain through the exercise of have-made rights. That does not seem to be the case. First, there is no case law in the United States or anywhere supporting that view. In all litigated cases, the courts recognized that licensed OEMs could rely on third parties to manufacture products for their own use. Moreover, in German law, the concept of “have made rights” corresponds to the notion of “extended work bench,”⁷⁰ whereby a licensed manufacturer is allowed to have components of the licensed products made by a third-party supplier under its directions/specifications. This third-party supplier would not, however, be allowed to “have made” some of the components it may itself need from manufacturers higher in the supply chain (tier-2 or tier-3) as they would not be part of the extended work bench of the licensed OEM.

66 See David Silver, *The Automotive Supply Chain, Explained*, May 31, 2016, available at <https://medium.com/self-driving-cars/the-automotive-supply-chain-explained-d4e74250106f>.

67 See, e.g. Jitendra Parasha, “Why Toyota’s Just-in-Time Method Is Critical to Its Success,” *Market Realist*, May 27, 2016, available at <https://rmarketrealist.com/2016/05/toyotas-just-time-method-critical-success/>.

68 See *Carey v. United States*, 326 F. 2d 975 (1964); *Advanced Micro Devices, Inc. v. Intel Corp.*, 885 P. 2d 994 (1994); *Cyrix Corp. v. Intel Corp.*, 879 F. Supp. 666 (1995); *COREBRACE LLC v. Star Seismic LLC*, 566 F. 3d 1069 (2009).

69 Amber L. Hatfield, “Patent Exhaustion, Implied Licenses, and Have-Made Rights: Gold Mines or Mine Fields,” (2000) *Computer L. Rev. & Tech. J.* 1.

70 See Christian Osterrieth, *Patent Law*, 5th ed. 2015, Rn. 695

A second issue relates to the scope of these have made rights in terms of what they would allow third parties operating under such an extended work bench model to do. Here again, these have made rights would be restrictive in that they would only allow the third-party supplier to the licensed OEM to produce components for the sole use of that OEM. In other words, the third-party supplier would not be allowed to produce components for other OEMs (unless they are also operating as an extended work bench for this OEM) or to produce components to be sold through traders on the open market.

Thus, with respect to connectivity solutions, it seems that the granting of have-made rights to an automotive OEMs would allow the OEMs to immunize from infringement manufacturers of TCUs for the TCUs specifically produced for the OEM's vehicles. However, the OEMs or its Tier-1 suppliers would *not* be able to immunize their suppliers higher in the supply chain, such as for instance NADs or modem manufacturers, which would therefore be exposed to a serious risk of infringement proceedings.

The market consequences would therefore be significant. First, while have made rights could potentially immunize Tier-1 TCU suppliers from infringement proceedings, they would still be unlicensed (as operating under have made rights is not operating under a license) and their commercial margin of maneuver would be narrow. Second, Tier-1 suppliers would be immunized from infringement only as long as the automotive OEM for which they operate as an extended workbench are licensed. If for some reason the OEM was no longer licensed or breached the terms of its license, they would be exposed to infringement proceedings. Third, this approach would rigidify or even make impossible trade in connectivity components as the production and sale of such components would always have to be made in the context of an extended work bench relationship. Fourth, have made rights would not immunize from infringements manufacturers of components that are higher in the supply chain as their production would not fall under these rights. Thus, it is not clear how a Tier-1 supplier that does not produce NADs or modems could lawfully acquire such components from companies, such as Samsung, Huawei or LG. This would call for vertical integration even when it is inefficient. In other words, have made rights limit the commercial scope of Tier-1 TCU suppliers and do nothing to allow Tier-2 and Tier-3 suppliers to lawfully manufacture and sell their components down the supply chain.

In this respect, an approach whereby Nokia would limit itself to license automotive OEMs (with or without have made rights) to the exclusion of component suppliers would likely breach EU competition law.

First, a license with an automotive maker to the exclusion of component makers could breach Article 101 TFEU as, by disrupting the automotive supply chain and impeding trade in components, it would be capable of “affecting trade between Member States in a manner which might harm the attainment of the objectives of a single market between the Member States, in particular by sealing off national markets or by affecting the structure of competition within the common market.”⁷¹

Second, this approach would breach Article 102(b) TFEU by limiting “production, markets or technical development to the prejudice of consumers.” Large suppliers of mobile communications technology would no longer be able to carry out their own product development (at their own risk and expense) and would face significant restrictions in the way they can market their products as they could only operate as contract manufacturers. The lack of a license would also create considerable uncertainty and hurt investment in new technologies.

F. How should SEP Licensing Adapt to the IoT Context?

The advent of the IoT is creating a new challenge for SEP licensing. While until now the bulk of SEP licensing took place in the mobile communications industry, the manufacturers of an ever-growing number of “connected” products will now have to take FRAND licenses for SEPs. As we have seen in Section E above, this is already what is happening in the vehicle manufacturing industry.

While bilateral negotiations make sense when the number of SEP implementers is relatively low (as is the case for mobile communication devices and connected cars), transaction costs would make it impossible when the number of SEP implementers is extremely high as would, for instance, be the case with respect to connected home appliances and medical devices. In that case, some collective licensing mechanisms should be contemplated.

In that context, the formation of patents pools seems to be desirable to facilitate SEP licensing in the IoT space provided of course that these pools comply with EU competition rules and do not turn themselves into patent trolls. As to compliance with EU competition rules, some helpful guidance can be found in the Guidelines on the application of Article 81 of the EC Treaty [now Article 101 TFEU] to technology transfer

⁷¹ C-295/04 to C-298/04, *Manfredi*, ECLI:EU:C:2006:461, at § 41.

agreements.⁷² As to the licensing terms of the pool, guidance can be found from the existing case-law on the determination of FRAND royalty rates. Now, to avoid the licensing disputes that have arisen in the mobile device and vehicle manufacturing industries, some original methods could be considered for the determination of licensing rates, such as for instance involving independent third-parties.⁷³ As to the rates themselves, the non-discrimination principle of FRAND should not prevent the application of different rates for different uses. It would indeed be absurd to charge the same rates for connected vehicles and smart meters as the connectivity needs of these products vary. The level of the royalty rates should also ideally take account of the significant growth of the addressable licensing market. Because the volume of licensed products will exponentially grow, the level of the rates should in principle decrease at least for the majority of applications.

Now, it does not mean that the formation of such pools will necessarily be easy. The main obstacle to the formation of pools in the field of mobile communication standards is linked to the fact that the respective interests of the main mobile communication SEP holders are not necessarily aligned given the variety of business models. It may thus be hard for SEP holders to agree on an internal compensation system. In addition, the main SEP holders have traditionally considered that they may be better off staying out of the pool and licensing their SEPs through bilateral negotiations, although when there are potentially hundreds or thousands of potential licensees, this would be an unlikely scenario. NPEs with small patent portfolios of dubious quality will generally avoid joining patent pools, which would only offer them small compensation given the size and quality of their portfolios, and rather pursue aggressive tactics on their own (such as, for instance, harassing SEP implementers with threatening letters in the expectation that some of them may pay the requested fee). Thus, while the joining of patent pools should remain voluntary, mechanisms should be developed to encourage participation.

If patent pools are the right vehicle for SEP licensing in the age of IoT, these pools should also be governed by adequate governance mechanisms, such as the appointment of an experienced pool administrator that is ideally independent from the licensors in the pool. In addition to the licensors' committee typically supervising the work of the pool administrator, one could perhaps envisage the addition of an advisory committee that would be composed of independent third parties drawn from industry, academia, and people with significant licensing experience. This would ensure that the pool takes a holistic approach to its licensing operations.

IV. CONCLUSIONS

While the past couple of decades have seen a lot of litigation before Member State courts, several major Commission investigations, and a landmark decision of the CJEU over various SEP licensing practices, many important issues remain to be satisfactorily addressed. This is not surprising, since the meaning of the FRAND commitment and, in particular, what FRAND licensing terms mean remains subject to contention. In addition, given the large financial amounts at stake, SEP holders and implementers are willing to engage in creative legal strategies to gain leverage in negotiation and litigation.

The advent of the IoT also raises a range of issues as the business model of the industries that are starting to manufacture connected products may not be consistent with the business model of smartphone OEMs on which current SEP licensing practice are based. With the number of SEP implementers likely to increase vastly in the years to come, as home appliances, medical devices, and a vast range of other products will use connectivity solutions, new licensing models will need to be developed with the aim of facilitating transactions and avoiding litigation.

⁷² OJ C 101, 27.4.2004, p. 2–42.

⁷³ Although this is a creative idea, nothing would prevent for instance a patent pool to give the task of setting its FRAND royalty rate(s) by a team of independent experts.

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