

FRAND Licensing Levels under EU Law

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This paper investigates whether EU or national law provide legal authority to impose a direct or indirect obligation on Standard Essential Patent (“SEP”) holders to license at all levels of the value chain, including at component level (“license to all”, hereafter LTA). Extensive analysis of EU text and case-law (general principles of EU law, patent, contract and competition laws) suggests that there are only very limited doctrinal grounds to impose an LTA obligation on SEP holders that made a FRAND commitment. Similarly, French contract law – which applies to FRAND-committed SEP before the European standard setting organisation ETSI – does not give rise to a legal basis for the introduction of a ‘license to all’ regime. In the rare cases where licensing obligations might be imposed on SEP holders, these would effectively be akin to compulsory licensing, where public policy calls for restraint.

Introduction

Technical interoperability standards enable communications devices to work together. They are key drivers of innovation in digital industries.¹ Today, computers, smartphones and tablets all connect to the internet and communicate thanks to interoperability standards such as 3G (UMTS), 4G (LTE), Wi-Fi or Bluetooth. Tomorrow, 5G interoperability standards are expected to deliver a new wave of digitization to many industries like automotive, health, home appliances, industrial robots, defence and many more.² Long forecasted, the perspective of a transformative Internet of Things (IoT) is becoming an increasingly concrete reality.

Technical interoperability standards are usually developed by private firms within the framework of Standard Setting Organisations (SSOs).³ This process brings together technology

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¹ For an explanation of the importance of standards to innovation, see Haris Tsilikas, “Collaborative Standardization and Disruptive Innovation: The Case of Wireless Telecommunication Standards,” Max Planck Institute for Innovation and Competition Research Paper No. 16-06 (May 17, 2016).

² For more information on the benefits of 5G see: IHS Economics and IHS Technology, ‘The 5G Economy: How 5G Technology Will Contribute to the Global Economy’ (January 2017).

³ For the discussion on different types and workings of SSOs, see Justus Baron, Jorge Contreras, Martin Husovec, Pierre Larouche, ‘The Governance of Standards Development Organisation and their Policies on Intellectual Property Rights’ (2019) JRC Science for Policy Report; European Commission, ‘Patents and Standards: A Modern Framework for IPR Based Standardisation’ (2014) p. 31-33. It is worth emphasising here that SSOs do not actually set standards. Rather, they act as a venue for the development and creating of technical specifications after which it is for the market to decide whether the standard will be widely adopted or not. The term Standard Setting Organisation might then be slightly misleading which is the reason why some authors prefer to use the term Standard Development Organisations instead. However, due to widespread use in the literature, we use here the term SSO while acknowledging that such bodies are responsible only for the development of standardised solutions, and not for their acceptance on the market.

developers and implementers willing to cooperate to develop communications standards and promote the widespread diffusion of innovation in society. Often interoperability standards read on patented technologies previously or contemporaneously developed by inventors participating in SSOs. When patents are technically necessary to implement a standard, they are called Standard Essential Patents (SEPs). Common illustrations of interoperability standards include Wi-Fi, MPEG 4-HEVC or 4G LTE. Such standards are often covered by many hundreds or thousands of SEPs held by various different patent owners.⁴

The critical upshot of the existence of SEPs is that manufacturers of products reading on interoperability standards should be protected from claims of infringement from SEP holders if they want to legally bring their products to the market. This can be achieved by obtaining a licence directly from the SEP owner or by indirectly benefiting from one. The SEP owner might also allow the use of its patents by other means such as non-assertion agreements or a decision to entitle unlicensed use of its patents.

Recognising the blocking potential of SEPs on standard's commercial adoption, SSOs have long developed patent policies that require their members to, ex ante: (i) disclose existing possession of, or future positions in, patents that are believed to be or might become essential; and (ii) commitment to give licenses on fair, reasonable and non-discriminatory (FRAND) terms.⁵ The conventional interpretation of FRAND commitments, supported by the Court of Justice of the European Union ("CJEU") is that they are a two ways street.⁶ On the one hand, they assure standards implementers that patent owners will make their essential patents available on terms that are fair reasonable and non-discriminatory. On the other hand, they assure technology developers a return on their research and development ("R&D") efforts through the licensing of their patents.

But with FRAND, as with all things legal, the devil is in the detail. For indeed, the meaning of what constitutes FRAND licensing terms has been the subject of intense litigation amongst high tech companies, and of increased academic polarisation in legal and economic scholarship.⁷ The hall of fame of FRAND cases covers fundamental issues, like the right for patent holders to obtain injunctions for infringement of SEPs,⁸ the optimal level of FRAND

⁴ Litigation over SEPs provides some information on the number of SEPs in a standard. See *Unwired Planet v Huawei* [2017] EWHC 2988 (Pat.) paras, 288, 377, 378 (finding that out of many thousands potentially essential patents, for the purposes of litigation it was taken that there are 800 SEPs for 4G LTE standards, 479 SEPs for 3G and 154 SEPs for 2G standards), also *In re Innovation IP Ventures LLC Patent Litigation* 956 F.Supp.2d 925 (N.D. Illinois 2013) 41-42 (estimating that there were approximately 3,000 SEPs for the Wi-Fi standard).

⁵ Justus Baron, Daniel Spulber 'Technology Standards and Standard Setting Organisations: Introduction to the Searle Center Database' (2018) 27 *Journal of Economics & Management Strategy* 462, 479 (studying IPR policies of 37 SSO and finding that 32 SSOs allow for FRAND licensing, with the remaining 5 SSOs require royalty-free licensing).

⁶ C-170/13, *Huawei v ZTE*, EU:C:2015:477 para 59; for summaries of national cases implementing *Huawei v ZTE* see <https://caselaw.4ipcouncil.com>

⁷ For comprehensive overview of FRAND cases up to 2017 see Chrysoula Pentheroudakis, Justus Baron, 'Licensing Terms of Standard Essential Patents: A Comprehensive Analysis of Cases' (Joint Research Centre 2017). For comprehensive summaries of all FRAND cases in the EU see <https://caselaw.4ipcouncil.com>

⁸ *Motorola - Enforcement of GPRS Standard Essential Patents* (AT.39985), Commission Decision C(2014) 2891 final; *Samsung - Enforcement of UMTS Standard Essential Patents* (AT. 39939), Commission Decision C(2014) 2892 final; C-170/13 *Huawei v ZTE*, ECLI:EU:C:2015:477; for academic literature on the use of injunctions for SEPs see Mark Lemley, Carl Shapiro, 'Patent Holdup and Royalty Stacking' (2007) 85 *Texas Law Review* 1991; 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 Journal* 101.

royalties,⁹ the optimal royalty base for FRAND royalties,¹⁰ the concept of non-discrimination,¹¹ and what constitutes “good faith” in licensing negotiations.¹²

This article discusses a question which has gained significant prominence in the 5G FRAND licensing context. Do FRAND commitments impose an obligation on SEP holders to respond positively to licensing demands from implementers regardless of their level in the production chain, including from component manufacturers (“LTA approach”)? Or, put differently: are SEP holders free to discretionarily choose at which level of the production chain to license, despite the FRAND commitment, leaving implementers at other levels with access to the standard without needing a license (“access all approach”, hereafter “ATA”)?

Academics and practitioners are divided on this question. The current industry norm is to license SEPs on final downstream devices. Arguments in favour of ATA stress that FRAND should be open and flexible to accommodate needs from different industries. In some industries like smartphones, end-products most accurately reflect the true value of standardised technologies as the functionality of the standard is only fully realised in the end-product device.¹³ Moreover, it is pointed out that the ordinary industry practice often follows ATA because of: (i) the transaction costs savings achieved in negotiations with one group of licensees; (ii) the efficiencies and ease of monitoring compliance with royalty payments and the use of products; (iii) the possibility to obtain mutual cross-licences between vertically integrated SEP owners; and (iv) to ensure non-discrimination between similarly situated licensees.¹⁴ Advocates of this regime often stress that ATA works: in practice, no firm willing to take a license was ever denied access to standardised technology, and no firm wishing to sell components to downstream manufacturers has been prevented from doing so.¹⁵ SEP holders exercise their patent rights by choosing the level of the supply chain at which they want to conclude licenses, typically based on industry practice. Once this is done, firms located elsewhere in the value chain indirectly benefit having access to standard without the need to directly obtain a license and are thus free to implement the standard. ATA proponents also attack LTA on incentives and efficiencies grounds. LTA would create adverse negative effects on innovators, as it would effectively impose a revenue cap and drive the royalties downwards.¹⁶ A requirement to license simultaneously across the production chain would

⁹ European Commission investigated Qualcomm for allegedly abusive non-FRAND royalties, Commission, ‘Antitrust: Commission closes formal proceedings against Qualcomm’ MEMO/09/516 (2009); also *Unwired Planet v Huawei*, [2017] EWHC 2988 (Pat).

¹⁰ This issue has mostly been litigated in the US. See *Ericsson v D-Link*, 773 F.3d 1201 (Fed. Cir. 2014); *CSIRO v Cisco*, 2015 WL 7783669 (Fed. Cir. 2015).

¹¹ *Unwired Planet v Huawei*, [2018] EWCA Civ 2344.

¹² Litigation based on FRAND negotiation process is mostly related to Germany. See for example *Saint Lawrence v Vodafone LG Dusseldorf*, Case No 4a O 74/14 (31 March 2016); *NTT DoCoMo v HTC*, LG Mannheim, Case No. 7 O 66/15 (29 January 2016).

¹³ See Gregory Sidak, ‘The Proper Royalty Base for Patent Damages’ (2014) 10 *Journal of Competition Law & Economics* 989; David Teece, Edward Sherry, ‘On the “Smallest Saleable Patent Practicing Unit” Doctrine: An Economic and Public Policy Analysis’ (2016) *Tushnet Centet for the Management of Intellectual Capital Working Paper Series* No. 11.

¹⁴ Marvin Blecker, Tom Sanchez, Erik Stasik, ‘An Experience-Based Look at the Licensing Practices That Drive the Cellular Communications Industry: Whole Portfolio/Whole Device Licensing’ (2016) December, *less Nouvelles* 221.

¹⁵ IP Europe, ‘Why “License to All” Could be a License to Kill Innovation in Europe’ (May 2017).

¹⁶ Axel Gautier, Nicolas Petit, ‘Smallest Saleable Patent Practicing Unit and Component Licensing: Why 1\$ is not 1\$’ (2019) 15 *Journal of Competition Law & Economics* 690.

create legal uncertainty, raise transaction costs, lead to unintended discrimination, increase licensing disputes and prevent beneficial mutual cross-licensing.¹⁷

On the other hand, arguments in favour of imposing an obligation on SEP holders to license at all levels of the value chain (LTA) often consider that components best reflect the value of a standardised technology and, therefore, that licences should be concluded with component manufacturers, or some other intermediate supplier.¹⁸ The underlying assumption is that SEPs are essentially implemented in a component (typically a baseband chip in the case of mobile handset). In turn, component manufacturers are assumed logical counterparts in licensing negotiations, not least because they possess the necessary knowledge directly relating to the standardised technology. By contrast, basing royalties on end-products has been likened by some to a “tax on innovation” that inappropriately overcompensates SEP holders for the value of multiple inventions and components unrelated to the standardised technology.¹⁹ End products do include many other patented and un-patented technologies and components. For instance, besides cellular connectivity smartphones also include Bluetooth connectivity, cameras, speakers, touchscreens, software applications, etc. It is argued by some that concluding licensing agreements with downstream manufacturers would allow SEP holders to capture the value of other technologies and components, unrelated to the value of their technology.²⁰ Accordingly, supporters of LTA read in FRAND commitment a legal obligation on SEP holders to conclude licences with any firm in the supply chain that so requests.

The LTA v ATA discussion is topical. With the advent of 5G and the IoT, a large population of firms in diverse industries may be confronted with SEPs. In a Communication on SEPs, the European Commission (“EC”) sought to reduce uncertainty by providing guidance on FRAND licensing. However, the EC left open the question of the optimal licensing level for FRAND committed SEPs, stressing that there is “no one-size-fit-all solution to what FRAND is” and that what can be considered fair and reasonable differs “from sector to sector and over time”.²¹ In 2019, two industry groups attempted to provide guidance but reached inconsistent results, one recommending LTA, the other ATA.²² Moreover, we are beginning to

¹⁷ Juan Martinez ‘FRAND as Access to All Vs License to All’ (2019) 14 *Journal of Intellectual Property Law & Practice* 642.

¹⁸ For industry arguments see Apple, ‘A Statement on FRAND Licensing of SEPs’ (2019) available at: <https://www.apple.com/legal/intellectual-property/frand/>; Fair Standards Alliance, ‘Position Paper- SEP Licenses Available to All’ (24 June 2016); CEN/CENELEC Workshop Agreement, ‘Core Principles and Approaches for Licensing of Standard Essential Patents’ (June 2019); for academic literature see Janusz Ordover, Allan Shampine, ‘Implementing the FRAND Commitment’, (2014) October, *The Antitrust Source* 1; Joseph Kattan, ‘The Next FRAND Battle: Why the Royalty Base Matters?’ (2015) 1, *CPI Antitrust Chronicles* 1; Roberto Grasso, ‘Standard Essential Patents: Royalty Determination in the Supply Chain’ (2017) 8 *Journal of Competition Law & Practice* 283.

¹⁹ See Fair Standards Alliance, ‘Position Paper- SEP Licenses Available to All’ (24 June 2016) p. 4.

²⁰ Additional argument is that the licensing on end-device level allows SEP holders to price differently based on the use of SEPs. The price for SEPs would be different if the standard is used in a more expensive smartphone, or in a car or smart meter. Under license to all approach, the price of the standard should ideally be the same unrelated to the downstream use of SEPs. See: CEN/CENELEC Workshop Agreement, ‘Core Principles and Approaches for Licensing of Standard Essential Patents’ (June 2019) p. 14-15.

²¹ Commission, ‘Setting Out the EU Approach to Standard Essential Patents’ (Communication) COM(2017) 712 Final, p. 6.

²² See CEN/CENELEC Workshop Agreement, ‘Core Principles and Approaches for Licensing of Standard Essential Patents’ (June 2019); CEN/CENELEC Workshop Agreement, ‘Principles and Guidance for Licensing Essential Patents in 5G and the Internet of Things (IoT), Including the Industrial Internet’ (June 2019).

witness the first signs of disputes in the automotive industry.²³ With connected cars, tensions arise whether car manufacturers or their component suppliers should take a licence to cellular standards. The LTA v ATA discussion is also critical in that it opens to question whether successfully engaging in standardisation by contributing patent-protected technologies affects fundamental elements of property rights.

Against this backdrop, our paper takes another perspective. While most of the existing literature on LTA v ATA is focused on *normative* arguments involving economic analysis, revenue sharing issues, and industrial policy considerations, our paper does not seek to explore what FRAND *should* mean, but rather what it *does* imply under European law. As far as we know, there is no comprehensive legal survey of the requirements imposed by FRAND commitments under European and national law. This may be because commentators either have assumed that the law was clear (when in fact it is not) or have focused on normative discussions on the assumption that the law necessarily supports certain normative arguments. This article aims to fill this gap by providing a *doctrinal* analysis of whether European and/or national laws provide legal bases to consider that a FRAND commitment imposes on SEP owners an obligation to license at any level of the production chain.

To that end, this article proceeds as follows. First, we analyse EU constitutional law to see whether the general principles of legitimate expectations and of non-discrimination can be used in a FRAND context to establish an LTA obligation. We then discuss patent law. Here, we try to understand what technologies SEPs claim and who could be required to take a license. Third, we look at principles of contract law. The analysis focuses on the text of FRAND commitment given before ETSI, and its interpretation under French law. Fourth, we look at whether EU competition law might be applied, while the last part will sketch the application of the findings of the article to licensing negotiations and will summarise the meaning of FRAND licensing levels under EU law.

Interpreting FRAND Licensing Obligation Under General Principles of EU Law

We start our inquiry with general principles. A claim might be made that an LTA obligation follows from the general principles of legitimate expectations and non-discrimination under EU law. We discuss these principles in turn.

²³ For example, German car manufacturer Daimler and its component supplier Continental complained to the European Commission that Nokia's practice for licensing SEPs only to final car-manufacturers is anti-competitive. Similar claims have been brought in US court alleging antitrust violations. Nokia, in turn, sued Daimler in Germany for infringement of its SEPs. See Foo Yun Chee, 'Continental, Valeo seek EU antitrust action against Nokia' (17 April 2019) Reuters, available at: <https://www.reuters.com/article/us-eu-nokia-patents/continental-valeo-seek-eu-antitrust-action-against-nokia-idUSKCN1RT1XL> and Scott Graham, 'Nokia, Daimler, Continental Ramp up global patent chess match' (14 June 2019) Law.com, available at: <https://www.law.com/therecorder/2019/06/14/nokia-daimler-continental-ramp-up-global-patent-chess-match/>

1.1 Legitimate Expectations

A first potential legal basis for an LTA obligation on SEP holders stems from the CJEU judgement in *Huawei v ZTE*. Here, the Court endorsed the view that standardisation and the FRAND commitment create “particular circumstances” that justify to distinguish them from cases brought under the (otherwise restrictive) EU competition case-law on essential facilities.²⁴ Instead of reasoning on the basis of that specific line of competition case-law, the Court plucked into general EU administrative law principles to affirm that a refusal to license can constitute an abuse of dominance because the FRAND term “creates legitimate expectations on the part of third parties” that such licenses should be given.²⁵

Any reader trained in EU law can instantly notice that the concept of “legitimate expectations” used by the CJEU is a general principle of EU law. Some writers talk of a “fundamental legal principle”.²⁶ Historically, the principle of legitimate expectations stems from German administrative law. It was first recognised by the CJEU in the 1978 *Lühns/Hauptzollamt Hamburg-Jonas* judgment.²⁷ At a high level, the principle of legitimate expectations provides that “those subject to the law may rely on Union measures or the conduct of its officials”.²⁸ At a more prosaic level, it entitles economic agents to challenge changes to the regulatory framework if this deviates from acts, measures or policy assurances previously taken by public institutions and their representatives.²⁹

Whichever the perspective, the principle of legitimate expectations limits the discretion of public institutions. The principle has often been used by the Court to limit the margin of manoeuvre of European and national executive organs, when adjudicating between individuals and public authorities. It applies to legislative and administrative acts, general and individual, typical and atypical, both by EU and Member States organisations. In the scholarship, diverse

²⁴ See Judgment of 16 July 2015, *Huawei v ZTE*, C-170/13, EU:C:2015:477, §§46-47.

²⁵ Id, §53. Note that a reference to the principle of legitimate expectations had previously appeared in a decision from the European Commission in Case AT.39985 – *Motorola*, 29 April 2014, C(2014) 2892 final (§417 “In view of the standardisation process that led to the adoption of the GPRS standard and Motorola’s voluntary commitment to license the Cudak SEP on FRAND terms and conditions, implementers of the GPRS standard have a legitimate expectation that Motorola will grant them a licence over that SEP, provided they are not unwilling to enter into a licence on FRAND terms and conditions”; and §521: “Apple and other manufacturers of GPRS-compliant products that are not unwilling to enter into a licence on FRAND terms and conditions should therefore be able to rely on the legitimate expectation that Motorola will honour its commitment to license the Cudak GPRS SEP on FRAND terms and conditions. The seeking and enforcement of an injunction by Motorola against Apple in Germany on the basis of the Cudak GPRS SEP runs counter to that commitment”).

²⁶ See Herwig Hofmann, Gerard Rowe and Alexander Türk, *Administrative Law and Policy of the EU* (1st edition, Oxford University Press 2012) p.178.

²⁷ See C-78/77, *Lühns/Hauptzollamt Hamburg-Jonas*, ECLI:EU:C:1978:20, p._00169. Some even trace it back to an earlier judgment in C-111/63 *Lemmerz Werke v High Authority* ECLI:EU:C:1965:76

²⁸ Herwig Hofmann, Gerard Rowe and Alexander Türk, *Administrative Law and Policy of the EU* (1st edition, Oxford University Press 2012) p.178.

²⁹ Legitimate expectations arise from three types of circumstances. First, an act or measure specifically provide rights or benefits to third parties, for example a subjective right to third parties. Second, policy assurances stem from acts of general application, even if they don’t give rise to definitive interests or vested rights. See Herwig Hofmann, Gerard Rowe and Alexander Türk, *Administrative Law and Policy of the EU* (1st edition, Oxford University Press 2012) p.185 Third, the conduct of EU institutions gives rise to “precise, unconditional and consistent assurances originating from authorised and reliable sources”.

concepts have been advanced to rationalize the principle of legitimate expectations: good faith,³⁰ fairness in public administration, reliance, rule of law and trust in government.³¹

A critical point, yet that is often overlooked, is that the principle of legitimate expectations has seldom been invoked successfully. The common case features an economic agent who claims a violation of legitimate expectations in order to reverse the loss of a right or of a benefit (*e.g.* acts or measures revoking subsidies, phasing out production quotas or laying down import bans).³² Most cases brought to the CJEU concern sectors where the EU exerts a significant degree of regulatory control, like agriculture, steel and to a lesser extent external trade policy.³³ The large majority of unsuccessful claims stems from the complex trade-off between, on the one hand, the public interest of safeguarding the necessary adaptability of the legal framework by governance institutions and, on the other hand, the private interest of safeguarding investments of market players by conditions of regulatory certainty.³⁴

The concept of “legitimate expectations” is subject to stable judicial interpretation. Some first order principles emerge from the case-law. First, not every frustration of legitimate expectations is unlawful. As Professor Paul Craig clearly writes, “even if the applicant is able to prove the substantive legitimate expectations, this does not mean that he or she wins”.³⁵ And indeed, the case-law of the EU courts “balances” legitimate expectations with other considerations prior to determining that EU law has been infringed.³⁶ On the one hand, the Court looks at objective considerations to establish whether an “overriding public interest” justifies a change in regulatory policy.³⁷ For example, AG Wahl has said in his Opinion in *Kotnik* that “ensuring the stability of the financial system while avoiding excessive public spending” could constitute overriding public interests. On the other hand, the Court reviews subjective considerations linked to the conduct of the victim.³⁸ Consent, fraud, wrongdoing or deception can also redeem a breach of legitimate expectations. For example, in *Sideradria*, the Court held that the protection of legitimate expectations may not be relied upon by a recipient which has committed a manifest infringement of the rules in force.³⁹

Second, legitimate expectations may be “conditional”. Where an initial assurance is given by a public institution subject to certain conditions being met, and where it is found at a later date that the conditions have not been fulfilled, there is no breach of legitimate

³⁰ See Jean Claude Gautron, *Le principe de protection de la confiance légitime, Liber Amicorum, en l’honneur de Jean Raux*, Editions Apogée 2006.

³¹ See Paul Craig, ‘Legal Certainty and Legitimate Expectations’ in *EU Administrative Law* (2nd edition, Oxford University Press 2012) p.554-555.

³² See Eleanor sharpston, *European Community Law and the Doctrine of Legitimate Expectations: How Legitimate, and for Whom*, 11 *Nw. J. Int’l L. & Bus.* 87, 103 (1990).

³³ *Ibid.*

³⁴ *Ibid.* A “major problem” has been the issue of “retroactive legislation”, p.94.

³⁵ See Paul Craig, *supra* p555.

³⁶ *Ibid.* As Paul Craig writes, the ECJ balances “*the legitimate expectations with the public interests*”.

³⁷ See C84/78, §20. It also considers that legitimate expectations can be balanced against a legitimate public interest (*Lagardère* T-251/00, §140 and *Alpha Steel*, C-14/81). This is seen in many cases. In *Tomadini*, the Court noted that the need to balance the legitimate of those concerned with the need to protect the public interest. The legitimate expectations of the affected persons needed to be preserved by transnational measures, “*unless the adoption of such measures is contrary to an overriding public interest*”.

³⁸ See AG Wahl Opinion, Case C-526/14, *Kotnik and Other* ECLI:EU:C:2016:102.

³⁹ See Case 67/84 *Sideradria v Commission*, ECLI:EU:C:1985:506, §21.

expectations where a public institution does not honour its early promise.⁴⁰ For example, in *Oliveira*, a grant of financial assistance was conditional on certain requirements, and the applicant had breached those relevant rules.⁴¹ The Court denied the benefit of legitimate expectations, even though the initial decision was capable to generate legitimate expectations.

Third, the principle of legitimate expectations applies to vertical relationships. By this we mean that the principle of legitimate expectations protects economic agents vis à vis the State. It does not apply horizontally to protect economic agents vis-à-vis other economic agents.⁴² Admittedly, some national legal systems recognize a derivative of legitimate expectations in private relations between private parties. In the UK, the principle of Estoppel is one such example.⁴³ But this principle has not, to date, been recognized as a general principle of EU law. Indeed, in other areas of EU law, the CJEU has also occasionally accepted to extend the benefit of the protection of general principles of EU law in private relations but this is rare. When it has done so, it has generally relied on a textual basis in primary EU law like the principle of non-discrimination in the Charter of Fundamental Rights of the EU.⁴⁴ Perhaps, the competition rules of the TFEU could provide such a legal basis, but it is not clear to us that this has been the case.

1.1.1 Impact on FRAND licensing

In *Huawei v ZTE* the Court reasoned that a FRAND commitment creates a legitimate expectation on the part of third parties that the patent owner will licence on FRAND terms. Because the Court's statement is phrased indiscriminately to the benefit of any third party, it could potentially be read as a basis for the introduction of an LTA regime.

Yet, a close consideration of the abovementioned general EU case law suggests that a duty to "license to all" based on the principle of legitimate expectations would not come entirely unqualified and could not create such a broad general legal obligation as between private interests. Similarly, the case-law on legitimate expectations suggests that there is not, and there cannot be a "one size fits all" duty to license a SEP for which a FRAND commitment was placed. Lastly, given the traditional application of the principle of legitimate expectations in vertical settings, it cannot be ruled out that the reference to the protection of legitimate expectations in a private setting in *Huawei v ZTE* is decorative, and not dispositive. We push those three intuitions further in the following sections.

1.1.1.1 Qualified duty to "license to all"?

⁴⁰ Paul Craig, 'Legal Certainty and Legitimate Expectations' in EU Administrative Law (2nd edition, Oxford University Press 2012, p.559.

⁴¹ Ibid, p.572.

⁴² As noted by Professor Dero-Bugny, the duty generated by legitimate expectations bears on a public institution, and not on all subjects of law. Delphine Dero-Bugny, « Les principes de sécurité juridique et de confiance légitime », dans J.-B. Auby, J. Duheil de la Rochère (dir.), Droit administratif européen, Bruxelles, Bruylant, 2014, 2^{ème} ed., p. 651.

⁴³ See Stuart, M. 'Legitimate Expectations and Estoppel in Community Law and English Administrative Law', (1983) 10 *Legal Issues of Eur. Integration* 53.

⁴⁴ See, for example, C-555/07 *Küçükdeveci* [2010] ECLI:EU:C:2010:21.

Huawei v ZTE brings the important caveat to the duty to license of a FRAND-committed SEP owner. Paragraph 54 reads as follows: “However, under Article 102 TFEU, the proprietor of the patent is obliged only to grant a licence on FRAND terms”.

In the light of the above on the conditionality of legitimate expectations, this is perfectly understandable. The duty to license of the SEP owner only arises if the implementer has offered or accepted FRAND conditions (and if there is harm to competition). Of course, the next question consists in determining the content of FRAND conditions. As one of us has written elsewhere, the *Huawei v ZTE* Court does not endorse a distributional understanding of FRAND.⁴⁵ Put differently, *Huawei v ZTE* does not propose to read FRAND as a specific price level. Instead, the Court seems to convey a procedural understanding of FRAND.⁴⁶ In this alternative, it deems FRAND the licensing conditions that emerge when both SEP owner and implementers accept to negotiate within the context of certain rules of “good governance”.⁴⁷

1.1.1.2 *No one size fits all duty to “license to all”*

The case-law of the EU courts shows that the protection of legitimate expectation is “context specific”, such that a same representation may support a finding of infringement of EU law in one case and not in the other.⁴⁸ In addition, the case-law considers that unlike a binding act or measure, an *extra-legal* commitment – *e.g.* a speech, a statement, or a soft law instrument – only generates legitimate expectation if it can be established that sufficiently “specific” and “precise” assurances are given.⁴⁹ Traditionally, the Court has been reluctant to find that representations are sufficiently specific and precise.⁵⁰

With this background, FRAND commitments should be treated in the same way as extra-legal commitments are treated in the case-law on legitimate expectations. And given that there is not a one size fits all FRAND commitment, but that there are instead many diverse

⁴⁵ Nicolas Petit, ‘Judicial Convergence at the Patent-Antitrust Intersection’ (2015) 2 *CPI Antitrust Chronicle* 2.

⁴⁶ This would therefore align the procedural FRAND legitimate expectations, with the distinction drawn by Paul Craig between two kinds of legitimate expectations. First, procedural legitimate expectations denote “the existence of some species of process right, whether in the form of natural justice, fairness or a related idea of consultation, which the applicant claims to possess as the result of some behaviour by the public body which generates the expectation”. This is to be distinguished from “*substantive legitimate expectations will be used to refer to the situation in which the applicant seeks a particular benefit or commodity, whether this takes the form of a welfare benefit, a licence*”. Craig notes that the “*the adjectives procedural and substantive are not to be found attached to legitimate expectation within Community law*”. See: Paul Craig, ‘Legal Certainty and Legitimate Expectations’ in EU Administrative Law (2nd edition, Oxford University Press 2012) p.

⁴⁷ The licensing framework set out by the Court illustrates that FRAND is a comity device that generates bilateral fair play obligations on both the patent owner and prospective licensees. Lundqvist talks of “good governance procedural rules”. Björn Lundqvist (2015) The interface between EU competition law and standard essential patents – from Orange-Book-Standard to the Huawei case, *European Competition Journal*, 11:2-3, 367-401, DOI: 10.1080/17441056.2015.1123455. CEN-CENELEC, an EU SSO, says that FRAND has “procedural meaning”. CEN and CENELEC position on: STANDARD ESSENTIAL PATENTS AND FAIR, REASONABLE AND NON-DISCRIMINATORY (FRAND) COMMITMENTS, September 2016.

⁴⁸ See Herwig Hofmann, Gerard Rowe and Alexander Türk, *Administrative Law and Policy of the EU* (1st edition, Oxford University Press 2012) p.178.

⁴⁹ In *Citymo v Commission*, the General Court said that only “*precise, unconditional and consistent information*” can lead third parties to entertain legitimate expectations. See judgment of 8 May 2007, *Citymo v Commission*, T-271/04, EU:T:2007:128, §138.

⁵⁰ Paul Craig, ‘Legal Certainty and Legitimate Expectations’ in EU Administrative Law (2nd edition, Oxford University Press 2012) p.568.

FRAND regimes, so there should not be any duty to license to all or particular classes of implementers. With this, third parties' expectations will very much depend, in each case, on the content of the *specific* FRAND commitment given to the *specific* SSO in question, which in turn depends on the latter's *specific* IPR policy. To take a more concrete example, if the SSO policy says that FRAND entails Royalty Free ("RF") or Smallest Salable Patent Practicing Unit ("SSPPU") pricing, then an offer deviating from RF or SSPPU in licensing contracts could frustrate those expectations.⁵¹ But if the SSO policy says nothing of specific licensing conditions, third parties cannot nurture any legitimate expectations in their dealings with SEP owners of such conditions, beyond the fact that, in the context of injunction proceedings, they will benefit from the *Huawei v ZTE* negotiation framework, which is focused on the commercial practice.⁵²

At a more general level, under the European case-law a FRAND commitment given to a SSO with a detailed patent policy – like the 2015 IEEE revised patent policy – will likely trigger legitimate expectations towards third parties, while a FRAND commitment given to a SSO with a less prescriptive patent policy – like the current ETSI patent policy – will likely not.

The bottom line is thus that there is not a one size fits all duty to license to all on FRAND terms. A third-party implementer does not enjoy a universal right to license a SEP, but instead his right varies with the specific FRAND commitment given to the SDO.

1.1.1.3 *Is the reference to "legitimate expectations" dispositive?*

To date, the principle of legitimate expectations has been applied exclusively to vertical relations between the State and economic agents. Its introduction in the context of horizontal licensing practices between SEP owners and implementers is to say the least unprecedented. Unless one is ready to contemplate an extreme analogy between a dominant SEP owner to a State organ, the horizontalization of the principle of legitimate expectations is a radical expansion of EU law in the sphere of purely economic transactions. Given the transversality of general principles of law, this evolution could pave the way to the application of EU law over the entire sphere of private relations.

With this, doubts arise as to whether the reference to legitimate expectations in *Huawei v ZTE* is dispositive. And those doubts are indeed difficult to dispel. First, neither paragraph 53 nor 54 cite previous case-law in relation to legitimate expectations. This could be read as a sign that *Huawei v ZTE* introduces a novel legal principle. At the same time, even when it reverses case-law, the Court has traditionally referred expressly to previous judgments.⁵³ Second, and perhaps more importantly, all past cases of horizontalization of EU norms have been based on an explicit reference to overarching provisions of primary law, like the Charter on Fundamental Rights of the EU. Here, no such reference is brought in support. Last, but not

⁵¹ On SSPPU, see Nicolas Petit, Axel Gautier, 'Smallest Salable Patent Practicing Unit and Component Licensing – Why 1\$ is Not 1\$' (2019) 15 *Journal of Competition Law & Economics* 690.

⁵² See Nicolas Petit, '*Huawei v ZTE*: Judicial Conservatism at the Patent-Antitrust Intersection', (2015) 2 *CPI Antitrust Chronicle*, 1-8.

⁵³ See Laurent Coutron, *Style des arrêts de la Cour de justice et normativité de la jurisprudence communautaire*, RTD Eur. 2009 p. 643.

least, past cases in the field of competition law have seemed to refuse the very idea that private organisations could generate legitimate expectations vis a vis other private organisation. In *Schenker*, the Court considered that the “legal advice given by a lawyer cannot, in any event, form the basis of a legitimate expectation on the part of an undertaking that its conduct does not infringe Article 101 TFEU or will not give rise to the imposition of a fine”,⁵⁴ though it held this not because lawyers are private persons but because they are not a “competent authority” with enforcement powers.⁵⁵

1.2 Non-Discrimination

An alternative source of legal authority for an LTA obligation on SEP holders could be explored in the profuse text and case law on the principle of “non-discrimination”.⁵⁶ For indeed, the general EU law on non-discrimination could either provide enforceability, or at least guidance, to the ND prong of a FRAND commitment. Before we discuss this, we must lay out a frictional baseline scenario, and provide a reminder of EU law on non-discrimination.

1.2.1 Baseline scenario

Assume that connected cars are a reality. Firm A holds most FRAND-committed SEPs that enable infotainment systems to communicate with other devices like handsets, tablets, smart watches and augmented reality devices. Firm A contacts automotive manufacturing companies X, Y and Z to start licensing negotiations with them. All three automotive manufacturers forward the letter to candidate infotainment systems suppliers L, M and N. Reading this as an invitation to start licensing negotiations, they write individually to firm A seeking to obtain FRAND licenses.

Firm A declines the invitation to enter into licensing negotiations with the suppliers. It replies to infotainment suppliers that it is already seeking FRAND licenses with end product automotive manufacturers (though it is unaware of their reluctance).

L, M and N, who compete for selection in X, Y and Z cars, complain to firm A that its reply is discriminatory. Firm A counter argues that its conduct is non-discriminatory. Infotainment suppliers are distinct from automotive manufacturers, and the principle of non-discrimination does not require to treat distinct situations similarly. Infotainment suppliers do not give up. They recall to firm A that it has granted FRAND licenses to audio-visual equipment suppliers in the aeronautic industry, and that it has not sought licences with end product aircraft manufacturers.

1.2.2 European Law on Discrimination

⁵⁴ See C-681/11, *Schenker & Co. and Others*, ECLI:EU:C:2013:404, §41.

⁵⁵ See Opinion of AG Kokott, ____ § _____. In her Opinion, AG Kokott may have come closer to that idea, noting that “*expectations created by the statements made by such State authorities appear to be more legitimate than expectations created by the opinions of private legal advisers*”.

⁵⁶ Also known as the principle of “*equal treatment*”

The ND prong of “FRAND” has attracted little interest in scholarly work on SEPs. This is paradoxical. Under EU law, discrimination is extensively prohibited. The founding treaties proscribe it at Articles 2 and 3 TEU and Articles 8 and 19 TFEU. In its case law, the CJEU has affirmed a general principle of non-discrimination and Article 21(1) of the Charter of Fundamental Rights provides that: “any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited”. As is common in most legal system, discrimination is understood either as treating like cases differently, or as treating distinct cases similarly.

Owing to its status as a fundamental right recognized in the Charter, the question naturally arises as to whether firms can lawfully invoke general EU non-discrimination law in the context of horizontal disputes with other private sector entities, and not simply in contexts involving interaction with State. In our example, can L, M and N sue Firm A on the ground that they are adversely disfavoured by comparison with audio-visual equipment suppliers from another industry? The legal question here is not whether they are (or not) discriminated against. It is whether the non-discrimination provisions of the Charter are in themselves sufficient to give them standing to start proceedings against firm A regardless of the merits of their case.

Little known by business lawyers – let alone patent lawyers – is that the CJEU case-law has followed an activist stance in relation to non-discrimination, recognizing the possibility of horizontal direct effect in a broad range of situations.⁵⁷ In particular, and unlike the principle of legitimate expectation, the CJEU has confirmed that the prohibition of discrimination could apply directly in the context of private legal relationships.

Now, this extension of the case law has not been limitless. Leaving aside the specific and easy case of non-discrimination on the grounds of nationality, the CJEU has essentially accepted to horizontalize the applicability of the principle of non-discrimination in relation to gender and age inequalities.⁵⁸ By contrast, we are unaware of any fruitful application of the principle of non-discrimination in relation to the situational position occupied by firms in licensing supply chains. And in reality, the reference to discrimination on grounds of *property* at Article 21(1) of the Charter seems more protective of SEP holders, than implementers. After all, there is some meat to the controversial claim that it is discriminatory to impose on SEP holders obligations stricter than on ordinary patent holders, in light of the arguably higher social value of SEPs.

In two cases in *Eigenberger* and *Bauer*,⁵⁹ the CJEU has come close to the recognition a horizontal direct effect to the principle of non-discrimination found in the Charter. Put differently, the CJEU seems to accept that a private party relies on Article 21 to challenge another private party conduct, be it the dismissal of a job application or annual paid leave conditions in employment relationships. Nothing, as a matter of principle, seems to prevent the transposition of that reasoning to licensing disputes over FRAND committed SEPs.

⁵⁷ E. Muir, A. Pieter van der Mei, Editorial: Equality or Non-Discrimination, *MJ* 1-2/2011, 5

⁵⁸ R. Xenedis, ‘Shaking the Normative Foundations of EU Equality Law: Evolution and Hierarchy Between Market Integration and Human Rights Rationales’, *EUI Working Papers* 2017/4, 6.

⁵⁹ See C-414/21 *Egenberger*, ECLI:EU:C:2018:257 at §76 and C-519/16 *Superfoz – Supermercados*, ECLI:EU:C:2017:601 at §85.

Moreover, one may argue that a FRAND dispute between the infotainment suppliers and firm A has a vertical component because: (i) FRAND commitments are given to SSOs; and (ii) that European SSOs are (for at least three of them) officially recognized by the EU institutions.

1.2.3 Application

Doubts arise as to the possibility that the general EU law principle of non-discrimination produces direct legal obligations on FRAND-committed SEP owners, and in particular LTA obligations. Surely, the recent case law of the CJEU recognizes that the Charter of Fundamental Rights produces direct effects on private firms. In particular, it seems to suggest that private persons must *also* pursue the public interests and moral standards protected by constitutional instruments.

However, there are both specific and general reasons to doubt a possible transposition to the business context of patent licensing negotiations. To start with the specific reasons, in *Huawei v ZTE*, the CJEU implicitly admitted that the SEP holder enjoyed the possibility to differentiate FRAND terms across levels of production. The Court, in particular said at paragraph 64 that “in the absence of a public standard licensing agreement, and where licensing agreements already concluded with other competitors are not made public, the proprietor of the SEP is better placed to check whether its offer complies with the condition of non-discrimination than is the alleged infringer”. What this means is that the patent holder’s obligation to equal treatment only applies to the licensee and its “*competitors*”, that is players located at the same level in the value chain *and* in the same product and geographic market. By contrast, the patent holder can differentiate licensing terms (or simply not seeking to license but allowing access) between: (i) component suppliers and end product manufacturers; *and* (ii) component suppliers active in distinct product markets. In our example, firm A can offer distinct terms of access licensees provided they are not competitors. Therefore, L, M and N are not entitled to the rates applicable to component suppliers in the aeronautic industry.

A vertical non-discrimination requirement would also make it difficult, if not impossible, for an SEP owner to ensure horizontal non-discrimination. Say, for example, in the scenario above L and X have each obtained a licence. In this simple scenario a SEP owner will have negotiated FRAND rates with each of them which will aggregate to a FRAND rate for the end user. However, horizontal non-discrimination obliges the SEP holder to treat similarly situated parties in a similar way. Accordingly, it should also seek a licence from M, N, Y and Z too if they are similarly situated. However, M and Y refuse to take a licence while N and Z are in the process of agreeing a licence. To add to the complexity further L, M and N each supply X, Y and Z differing quantities of infringing components. To ensure non-discrimination between each of these organisations would require either continual re-negotiations of licences to take into account changes in circumstances or very complex, and probably unworkable, accounting and tracing mechanisms in the terms of licences to take into account unlicensed parties and future licensees to ensure that parties who are being supplied licensed, to be licensed and non-licensed components, modules etc. are not paying too much or little royalties to A and thereby ensuring that the total end use royalty burden remains similar. A further complexity is that in reality there is a spider web of supply chains between many multiple levels of supplier and customers. Single level licensing avoids this complexity.

As to the general reasons, the CJEU has expanded its case-law in relation to *workers' right*, in line with its progressive judicial policy in relation to social issues, not economic ones. In addition, the CJEU's recognition of a direct horizontal effect to the prohibition of non-discrimination is to some extent a legal trick, possibly restricted to the exceptional circumstances of the cases in which specific instruments of EU secondary legislation were in discussion.⁶⁰

Last, what is more is that the Charter also enshrines many other conflicting provisions of equal ranking, including the “freedom to conduct a business”,⁶¹ the right to property, in particular intellectual property,⁶² or the “freedom of the arts and science”.⁶³ A case requiring such a degree of balancing between fundamental rights – and economic trade-offs – would likely be a hard case, that the EU courts would approach with a conservative perspective (and do so expressly).⁶⁴

2 Patent Law

Patent law is the next area to analyse and see if it may provide guidance on the level of the production chain at which an SEP holder may be required to license. In Europe, the substantive rules of patent law are set out in two international conventions. The European Patent Convention covers questions of patentability and scope of protection,⁶⁵ while the Community Patent Convention covers what acts amount to infringement.⁶⁶ Although the latter Convention never entered into force, its provisions have been implemented in a number of European countries, such as UK, Germany and the Netherlands.

In substance, the extent of patent protection is “determined by the claims” of a patent.⁶⁷ Thus, in order to find out whether or not an invention is protected by a patent one needs to look at specific claims. In other words, no-one needs permission unless what it wants to make, use or distribute falls within the scope of the patent concerned.

If a product or process falls within the scope of the claims of the patent, it is said to be infringing the patent.⁶⁸ Patent laws grant the proprietor of a patented invention the right to

⁶⁰ Rendered here necessary because it could not rely on the provisions of EU directives (deemed inapplicable horizontally).

⁶¹ Article 16 of the Charter

⁶² Ibid, Article 17(2).

⁶³ Ibid, Article 13.

⁶⁴ For example of a restrictive and exceptional approach, see CJEU, 222/84, *Marguerite Johnston v Chief Constable of the Royal Ulster Constabulary*, ECLI:EU:C:1986:206.

⁶⁵ Convention on the Grant of European Patents (European Patent Convention) of 5 October 1973 as revised by the Act revising Article 63 EPC of 17 December 1991 and the Act revising the EPC of 29 November 2000.

⁶⁶ Agreement Relating to Community Patents [1989] OJ L 401 (Community Patent Convention).

⁶⁷ Article 69 of the EPC.

⁶⁸ Infringement may be direct or indirect infringement. See Article 25 of the Community Patent Convention (“A Community patent shall confer on its proprietor the right to prevent all third parties not having his consent: (a) from making, offering, putting on the market or using a product which is the subject-matter of the patent, or importing or stocking the product for these purposes; (b) from using a process which is the subject-matter of the patent or, when the third party knows, or it is obvious in the circumstances, that the use of the process is prohibited without the consent of the proprietor of the patent, from offering the process for use within the territories of the Contracting States; (c) from offering, putting on the market, using, or importing or stocking for these purposes the product obtained directly by a process which is the subject-matter of the patent”) and Article 26 of the

exclude others from using it without his permission (in legal terms, a “licence”).⁶⁹ As a rule, patent holders are free to decide whether to license their patents (they may refrain from licensing), to consent to infringement without seeking to enforce their rights or, if they do decide to make licenses available, they are free to set the terms.⁷⁰

A FRAND commitment however changes this situation in more than one way. The FRAND-committed SEP holder is required, to make available its patents to users of the standard: it cannot reserve implementation for itself. Moreover, licensing terms are bounded: the SEP holder must charge fair, reasonable and non-discriminatory terms.

Now, all this notwithstanding, the question of who needs to take a licence remains determined by basic principles of patent law. Only those that infringe patent claims need to take a licence and then only if the patent holder so requires. As expressly noted by the European Court, the FRAND commitment does not negate the substance of patent rights.⁷¹

Therefore, the first step in discussing who may need to take a license from a patent law perspective requires the analysis of patent claims. If the claims of SEPs are limited only to specific component(s), then a natural choice for concluding licensing agreements would be with component manufacturers. However, if SEPs claims are broader – for example, they read on final downstream devices or networks – then the situation is more complicated. In this variant, it may be equally legitimate for patent holders to seek licences from downstream producers. The next section looks in more detail at SEPs’ claims in order to determine what products they cover.

2.1 What do SEPs protect? The scope of SEPs’ claims

As we have just seen, from a patent law perspective, a product is deemed covered by a patent if it falls within its claims. Against this background, real life cases show a more complex picture: SEPs’ claims are not confined to a single component, but are related to a combination of multiple components, final downstream products and even networks. SEPs are also usually licensed as a portfolio, sometimes consisting of hundreds or even thousands of patent families.

Community Patent Convention (“A Community patent shall also confer on its proprietor the right to prevent all third parties not having his consent from supplying or offering to supply within the territories of the Contracting States a person, other than a party entitled to exploit the patented invention, with means, relating to an essential element of that invention, for putting it into effect therein, when the third party knows, or it is obvious in the circumstances, that these means are suitable and intended for putting that invention into effect”).

⁶⁹ See also for example: US Patent Act 35 U.S.C. 154 (“every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States”) [emphasis added]; UK Patents Act 1977, s. 60-61; Community Patent Conventions Articles 25-26.

⁷⁰ For overview of patent rights see: Tanya Aplin, Jennifer Davies, *Intellectual Property Law: Text Cases and Materials* (2nd edition, Oxford University Press 2013) pp 562-563 (“patent law confers a property right, i.e. a right enforceable *in rem* rather than *in personam*. Thus, a patent owner can exercise her exclusive monopoly right against third parties...”); Lionel Bently, Brad Sherman, *Intellectual Property Law* (4th edition, Oxford University Press 2014) pp. 610-612 (“the owner of a patent for product is given the right to make, dispose of, offer to dispose of, use, import, or keep the product, whatever for disposal or otherwise”).

⁷¹ *Huawei v ZTE*, C-170/13, EU:C:2015:477 para 59 (“...the irrevocable undertaking to grant licences on FRAND terms given to the standardisation body by the proprietor of an SEP cannot negate the substance of the rights guaranteed to that proprietor by Article 17(2) and Article 47 of the Charter...”).

An empirical study by Putnam and Williams analysed claims of Ericsson's patents declared essential for 2G/3G and 4G standards. The authors discovered that claims of Ericsson's SEPs portfolio read on: i) various components alone; ii) various components in combination; iii) complete handsets alone and iv) complete handsets in networks.⁷² They further found that none of Ericsson's SEPs claimed *only* the baseband chip.⁷³ Instead, around 71% of SEPs claimed some aspect of user equipment (i.e. downstream products), either alone or in combination with claims to the network.⁷⁴ Consequently, they determined that there is no single component that implements the whole SEP portfolio.

Similar findings were reached in litigation. In the UK *Unwired Planet v Huawei* case, two SEPs that were held valid and infringed claimed combination of components and whole networks.⁷⁵ And in Germany, several litigated SEPs involved claims related to a combination of components,⁷⁶ and even over whole networks.⁷⁷

This demonstrates that in complex standards SEPs cover technologies that cannot be reduced to one single component, such as a baseband chipset. While *some* SEPs involve claim over chipsets, they also often claim downstream products, networks and/or combination of components. Under patent law principles, if a product is not covered by claims of the patent, it does not infringe, and component manufacturer would not need a licence.⁷⁸ As not all SEPs read on one component (i.e. a chipset) this means that chipset manufacturers would not need, and be able to request a license from SEP holders. Implementers could potentially request a license only for a subset of SEPs that read on components. However, under patent law, they would not have an active right to force licensing, as patent law permits patent owners to choose whether they want to enforce their patents (or not).

Moreover, the doctrine of patent exhaustion plays an important role in deciding at which level of the production chain to license. We discuss the patent exhaustion implications in the next section.

2.2 The doctrine of patent exhaustion and its relevance for product chain licensing

⁷² Jonathan Putnam, Tim Williams, 'The Smallest Salable Patent-Practicing Unit (SSPPU): Theory and Evidence', (2016) Working Paper, pages 41-43. available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2835617>.

⁷³ Ibid, p. 42.

⁷⁴ Ibid, p. 43.

⁷⁵ See *Unwired Planet v Huawei* [2015] EWHC 3366 (Pat). (Claim 1 of EP 2 229 744: "Method in a first node for requesting a status report from a second node, the first node and the second node both being comprised within a wireless communication network" [emphasis added]);

and *Unwired Planet v Huawei* [2016] EWHC 576 (Pat) (Claim 1 of EP 1 230 818: "A method for conveying measurement information from a terminal in a first communication system to a second communication system,")

⁷⁶ *Saint Lawrence v Deutsche Telekom* (EP1 125 276 B1 covering pitch analysis device and pitch codebook search device).

⁷⁷ *Philips v Archos*, LG Mannheim, 7 O 209/15 (1 July 2016) (EP 1 062 745 B1 covering radio communication system comprising a primary stations and a plurality of secondary stations; EP 1 062 743 B1 covering a radio station for use in a radio communication system having a communications channel between the radio stations and a further radio station).

⁷⁸ However, indirect infringement remains possible, but manufacturers of components, in case of end-product licensing, are often protected by "have made" rights through a downstream licence. For more information see section 3.2 below.

The doctrine of patent exhaustion is relevant to the LTA v ATA discussion. Patent exhaustion means that the first authorised sale of a patented item terminates all patent rights to that particular item.⁷⁹ From an economic standpoint, patent exhaustion seeks to limit intellectual property holders' control over the distribution of patented goods, once they have lawfully sold them in a market.

Patent exhaustion exists in various EU Member States, such as the United Kingdom, the Netherlands, Germany, Italy,⁸⁰ as well as under EU law. As early as 1970, the CJEU held in *Deutsche Grammophon v Metro* that the holder of a copyright cannot exercise its exclusive rights to prohibit the distribution of records that were placed on the market by his consent in another Member State.⁸¹ The EU doctrine of exhaustion was subsequently applied to patents in *Centrafarm v Sterling Drug*,⁸² where a patent owner had sought to prevent parallel imports of drugs from the UK to the Netherlands (on the ground that they were infringing its Dutch patent). The CJEU held that once the patented product had been placed on the market in one Member State by the patentee or under his consent (under a license), the patent owner could not prohibit the sale of such patented product in another Member State. Its patent right has been exhausted. Since then, the patent exhaustion doctrine has been explicitly introduced in the EU Regulation on Unitary Patent Protection.⁸³

What, you may ask, is the relation between patent exhaustion and LTA? Put simply, the practical implication of patent exhaustion is that a patent holder may license only once in the production chain per patent. The first licensed sale of patented products exhaust patent rights. The patent owner can thus license its SEPs either to component or end-device manufacturers.⁸⁴

In practical terms, if a component maker would receive a license it would exhaust a subset of SEPs covering a standard. However, end-device manufacturers would still need a licence for remaining of SEPs that read on downstream devices and networks. A better approach is to have only one license where most, or better all, the patents in a portfolio are infringed and exhausted by the sale of the licensed product. This is achieved by licensing at end-device level. Exhaustion principles ensure that those downstream of the licensed party do not need a licence, while upstream parties (component makers) are protected by "have made" rights, whereby the licence allows to have or supply components that may infringe licensed patents. Even without explicit "have made" clauses, courts are unlikely to allow an injunction against upstream component makers supplying licensed entities.

⁷⁹ For patent exhaustion in the EU see: Christopher Stothers, *Parallel Trade in Europe: Intellectual Property, Competition and Regulatory Law* (Hart Publishing 2007) 40-44.

⁸⁰ See: Christopher Stothers, *Parallel Trade in Europe: Intellectual Property, Competition and Regulatory Law* (Hart Publishing 2007) 40-44.

⁸¹ C-78/70 *Deutsche Grammophon v Metro SB* ECLI:EU:C:1971:59.

⁸² C-191/90 *Generics and Harris Pharmaceuticals v Smith Kline and French Laboratories* ECLI:EU:C:1992:407

⁸³ Regulation (EU) 1257/2012 of 17 December 2012 Implementing Enhanced Cooperation in the Area of the Creation of Unitary Patent Protection [2012] L 361/1, Article 6 (providing that the rights conferred by the unitary patent will "not extend to acts concerning a product covered by that patent after that product has been placed on the market in the Union by, or with the consent of, the patent proprietor.").

⁸⁴ See *Apple v Qualcomm*, Case No. 3:17-CV-00108-GPC-MDD (S.D. Cal. 2018) (Apple claiming that Qualcomm's patents are exhausted by the sale of its chipsets. Apple and Qualcomm settled their dispute and the case about patent exhaustion remains unresolved).

Therefore, under patent exhaustion we come closer to ATA where the end device manufacturer is licensed, provided the ability to supply components to the licensed party is not curtailed or prevented by the patent owner either by the licence or the courts.

The German courts appear to have recognised the effects of patent exhaustion in SEP cases. In *Saint Lawrence v Vodafone*, an SEP owner sued network operators as distributors of infringing smartphones.⁸⁵ Manufacturers intervened in the proceedings. The court held that the patent holder is free to choose at which level he wishes to licence within a complex multi-level value chain. According to the court, a balance is struck as the SEP owner can choose on which level of the chain of production to sue, while the network operator and equipment manufacturer may choose between them who to accept a license. An outcome of this case is influenced by the fact the SEP owner chose to target network operator, while the prevailing commercial practice is to license to end-device manufacturers.

In another case with similar facts, the court was this time concerned that the choice of network operators as the preferred level of licensing was not consistent with prevailing industry practice in that sector, namely licensing to end-product manufacturers.⁸⁶ Moreover, a clause in proposed licensing agreement provided for a limited fee reduction in case of exhaustion under restrictive conditions that licensees would find hard to meet in practice. Due to, among others, unjustified departure from prevailing industry practice and for not appropriately taking into account the issue of exhaustion, the court refused to consider the SEP owner's licensing offer to the operator as FRAND.

The take-aways from German case-law are that industry practice and patent exhaustion matter. While the SEP owner is free to choose at which level of the value chain to license, a departure from established industry norm would need to be justified and patent exhaustion conditions would have to be explained. An ATA approach effectively resolves this. By exhaustively licensing on end-device level, a SEP owner is complying with established industry practice and SEP would be exhausted at that level – the SEP owner could not concurrently go and sue component manufacturers for same SEPs, as they are protected by “have made” rights.

3 Contract Law

As seen previously, the general principles of EU and patent law do not legally require the SEP holder to license to component manufacturers if it already makes licences available to manufacturers of final downstream products. However, the SEP owner may have a *contractual* duty to license to component manufacturers if he has accepted such obligation by undertaking a FRAND commitment. Such commitments are commonly imposed by SSOs on owners of patents who wish to have them included in the standards developed by these organisations.

⁸⁵ *Saint Lawrence v. Vodafone*, Case No. 4a O 73/14, Dusseldorf District Court (Landgericht Düsseldorf) [2016] Judgment of 31 March 2016.

⁸⁶ *Intellectual Ventures v. Vodafone*, Case No. 4c O 77/17, Dusseldorf District Court (Landgericht Düsseldorf) [2018] Judgment of 11 July 2018.

While FRAND commitments issued under the auspices of the various SSO are widely recognised as being of contractual nature,⁸⁷ their wording and the intention is different between SSOs, and their scope and purpose may vary. Whether a FRAND commitment imposes a duty to license at every level of the supply chain therefore depends on the particulars of that specific commitment. Accordingly, this section will start by analysing the text of the FRAND commitment in one of the largest and most important SSOs – ETSI – whose IPR declaration database contains a large number of patents declared essential for 3G, 4G and 5G standards,⁸⁸ to determine whether it imposes a duty to license at every level of the supply chain (4.1.). Next, this section will then look at the text of FRAND commitments given at other SSOs (4.2.).

3.1 ETSI's FRAND Commitment

While some precision is required on how ETSI's FRAND commitment is made binding on patent holders (4.1.1), the main questions that need to be addressed here are the scope of this commitment (4.1.2) and whether it is a 'license to all' commitment (4.1.3).

3.1.1 How does the ETSI FRAND commitment arise?

ETSI is a European standard setting organisation headquartered in France, that creates globally applicable standards for the telecommunications industry.⁸⁹ ETSI is incorporated under French law as an *association*, i.e. a non-profit organisation, and its by-laws are governed by French law. It is not disputed that, under French law, an association is a specific type of

⁸⁷ For literature supportive of contract law interpretation see: Mark Lemley, 'Intellectual Property Rights and Standard-Setting Organisations' (2002) 90 *California Law Review* 1889, 1909-1917; Roger Brooks, Damien Geradin, 'Interpreting and Enforcing the Voluntary FRAND Commitment' (2011) 9 *International Journal of IT Standards and Standardization Research* 1, 2 ("a FRAND commitment is the result of a voluntary contract between essential patent holders and a standards-setting organization, with the important corollary that the meaning of that commitment must be determined through the legal methods of contractual interpretation"); Douglas Ginsburg, Koren Wong-Ervin, Joshua Wright, 'The Troubling Use of Antitrust to Regulate FRAND Licensing' (2015) October, *CPI Antitrust Chronicle* 2; Chrysoula Pentheroudakis, Justus Baron, 'Licensing Terms of Standard Essential Patents: A Comprehensive Analysis of Cases' (Joint Research Centre 2017) pp 33-35 (discussing contract law interpretation of FRAND commitments); Gregory Sidak, 'The FRAND Contract' (2018) 3 *The Criterion Journal on Innovation* 1. Comp. Jorge Contreras, 'A Market Reliance Theory for FRAND Commitments and Other Patent Pledges' (2015) 2015 Utah L Rev 479, 506; the author, however, only takes a common law perspective.

⁸⁸ See the ETSI IPR online database: <https://ipr.etsi.org/>

⁸⁹ For more details on the ETSI and its organisation, see A. Neumann, 'The European Regulatory Framework for Standardisation in the Telecommunications Sector', in C. Koenig, A. Bartosch & J.-D. Braun (eds), *EC Competition and Telecommunications Law*, Kluwer Law International 2002, 617, 665 ff.

contract,⁹⁰ and it is thus the rules of French contract law⁹¹ that must be applied to interpret the ETSI by-laws and to determine its effects.⁹²

ETSI has issued, and revised on several occasions, an Intellectual Property Rights Policy (IPR Policy), which purports ‘to reduce the risk that [the ETSI] standards-making efforts might be wasted if SEPs are unavailable under Fair, Reasonable and Non-Discriminatory (FRAND) terms and conditions’.⁹³ In its current version, clause 6.1 of the ETSI IPR Policy provides:

‘When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory (“FRAND”) terms and conditions under such IPR [...]’

It is thus clause 6.1 of the ETSI IPR Policy that requires SEP owners to undertake to be prepared to grant irrevocable licences on FRAND terms and conditions, and the so-called ETSI FRAND commitment is an undertaking made by a SEP owner pursuant to the ETSI IPR Policy. While it is not disputed that this commitment is intended to be a legally binding one,⁹⁴ there have been some discussions on how its binding force can actually be accounted for.

Clause 12 of the ETSI provides that ‘The POLICY shall be governed by the laws of France’ and it is therefore not disputed that the undertaking mentioned at clause 6.1 of the ETSI IPR Policy is governed by French law. This has led to some difficulties, since any such undertaking appears to be unilateral in nature, and French law traditionally does not regard unilateral commitments as being valid sources of legally binding obligations. However, three French law mechanisms have been suggested, which may account for the legally binding nature of the ETSI FRAND commitment: (1) *accord de principe*; (2) *stipulation pour autrui*; and (3) *engagement unilatéral*.

⁹⁰ Yves Chartier, ‘L’association, contrat, dans la jurisprudence récente de la Cour de cassation’, *Mélanges Yves Guyon*, (Dalloz 2003) 195

⁹¹ French contract law has recently been modernised by *ordonnance n° 2016-131 du 10 février 2016 portant réforme du droit des contrats, du régime général et de la preuve des obligations*, which entered into force on 1st October 2016. Prior to this modernisation, the rules of French contract law were to be found in the French Civil Code, the *code civil*, but also to a large extent in the extensive case-law that had developed out of the Code’s provisions, which had remained practically unchanged since 1804. The 2016 reform was intended first of all as a restatement of the existing law and has resulted in the *code civil*’s provisions being renumbered and redrafted, in order to integrate those rules and developments that had been created by the courts or had taken place outside the *code civil*. Some changes have also been made to the existing law, however, and it can therefore be of importance whether a contract was concluded before 1st October 2016, in which case it is governed by the ‘old’ *code civil* and the ‘old’ contract law rules, or as of that date, in which case it is governed by ‘new’ *code civil* and the ‘new’ contract law rules.

⁹² See *Unwired Planet International Ltd v. Huawei Technologies Co. Ltd*, [2017] EWHC 711 (Pat) at [103]

⁹³ As explained on the ETSI website: <https://www.etsi.org/intellectual-property-rights?highlight=WyJpcHIiLCJwb2xpY3kiLCJwb2xpY3knIiwiaXBvYjIHBvbiGljeSld> (last accessed 16 July 2019).

⁹⁴ US courts, in particular, have on many occasions ruled that FRAND commitments taken at the request of SSOs are normally binding, even if their precise effects will depend on their precise wording; see the many cases cited by D. S. Bosworth, R. W. Mangum III & E. C. Matolo, ‘FRAND Commitments and Royalties for Standard Essential Patents’, in A. Bharadwaj, V. H. Devaiah & I. Gupta (eds), *Complications and Quandaries in the ICT Sector. Standard Essential Patents and Competition Issues*, SpringerOpen 2017, 19, 24 ff.

There is no official definition in French law for the concept of *accord de principe*. The concept stems from legal practice. It is neither mentioned in the old nor in the new French *code civil*. That said, an *accord de principe* is generally regarded as an agreement between two parties, whereby each agrees to carry out negotiations in good faith with a view to concluding a contract.⁹⁵

Obviously, an undertaking by a SEP owner taken pursuant to clause 6.1 of the ETSI IPR Policy cannot by itself create an *accord de principe*. A FRAND undertaking is purely unilateral, whereas an *accord de principe* is necessarily bilateral. That said, a FRAND undertaking may, however, be understood as an offer to enter into an *accord de principe*. Seen through that light, an *accord de principe* then arises when a potential licensee expresses its intention to negotiate a license, and thus accepts the offer to enter the *accord de principe*.⁹⁶

The second mechanism that can give rise to an obligation is the *stipulation pour autrui* (stipulation for the benefit of third parties).⁹⁷ The *stipulation pour autrui* is a legal mechanism whereby the parties to a contract grant a right to a third party against one or the other of them, called the promisor (*promettant*). *Stipulation pour autrui* is in substance the French version of the *ius quaesitum tertio* mechanism, which is known in almost all legal systems.⁹⁸ Importantly, the beneficiary of the *stipulation* may only be identified at the time when the promisor must fulfil his obligation.

In the present case, an undertaking taken pursuant to clause 6.1 of the ETSI IPR Policy can be construed as creating an agreement between the SEP owner and ETSI consisting in a *stipulation pour autrui*. Pursuant to this agreement, the SEP owner promises to be prepared to grant licenses on FRAND terms and conditions to standards implementers who wish to obtain a license. The SEP owner is thus the promisor, and potential licensees are the beneficiaries of this promise.⁹⁹

The third mechanism that can give rise to an obligation is the *engagement unilatéral* (unilateral undertaking). In an *engagement unilatéral*, an obligation is created when one party (the debtor) unilaterally decides to undertake a commitment towards the other party (the creditor). The consent of the other party is not necessary to create the obligation. *Engagement unilatéral* was not mentioned as a source of obligations by the old *code civil*, and French law previously was reluctant to admit that someone could bind himself through such an

⁹⁵ See e.g. Bertrand. Fages, *Droit des obligations*, (8th edn, LGDJ 2018) § 6. See also Cass. Com., 10 January 2012, no. 10-26149.

⁹⁶ The mere implementation of the standard on the user's part can in certain circumstances be regarded as an agreement to enter the *accord de principe*, but not in all of them, since a user may have no attention to pay for licence, or to negotiate for one.

⁹⁷ *Stipulation pour autrui* used to be mentioned at article 1121 of the old *code civil* and is now regulated at articles 1205 to 1209 of the new *code civil*. The new provisions are much more detailed than the former article 1121, but it is undisputed that they are only intended to restate rules and solutions that had been developed by case law on the basis of that article. One can therefore turn to these provisions to know what the conditions and effects of a *stipulation pour autrui* are under French law, regardless of whether it was agreed upon before or after the entry into force of the new *code civil*.

⁹⁸ As article 1205 of the new *code civil* puts it: 'A person may make a stipulation for another person. | One of the parties to a contract (the "stipulator") may require a promise from the other party (the "promisor") to accomplish an act of performance for the benefit of a third party (the "beneficiary"). The third party may be a future person but must be exactly identified or must be able to be determined at the time of the performance of the promise.'

⁹⁹ See, discussing the possibility of an obligation to negotiate arising from a *stipulation pour autrui*, M. Mignot, *Stipulation pour autrui*, in *JurisClasseur Civil Code*, Art. 1205 à 1209, 2016, no. 84-85

undertaking, especially as it was regarded as dangerous for potential debtors. However, the law has changed, and it is now undisputed that *engagements unilatéraux* exist in French law and that they are apt to create obligations.¹⁰⁰

Admittedly, the new *code civil* does not give many indications as to when an *engagement unilatéral* can create a valid obligation. The situation here, however, is precisely the type of case in which such an engagement makes sense. The patent owner is a professional and, subject to the nature and scope of the ETSI FRAND commitment being clearly defined, he will not, by making such *engagement unilatéral* as may result from an undertaking taken under clause 6.1 of the ETSI IPR Policy, commit himself to something unreasonable, dangerous or beyond his expectations.¹⁰¹ Such undertakings are therefore a typical case in which French law could and should recognize the existence of a valid *engagement unilatéral*.

There are thus three mechanisms that can account for how the declarations made pursuant to clause 6.1 of the ETSI IPR Policy create a valid and enforceable obligation under French law. While *engagement unilatéral* can be seen as the one which better reflects the rationale of such declarations, which are unilateral in nature, a majority of authors, in France¹⁰² and abroad,¹⁰³ as well as several courts,¹⁰⁴ have analysed ETSI declarations as being *stipulations pour autrui*. The main and undisputed conclusion, however, is that ETSI FRAND commitments are indeed binding under French law.

3.1.2 What is the scope of the ETSI's FRAND commitment?

Another question, which may not be central in the LTA-ATA debate, but nevertheless needs to be addressed, is that of the scope or substance of an ETSI FRAND commitment. In other words, to what does a SEP owner commit himself, when he makes a declaration pursuant to clause 6.1 of the ETSI IPR Policy? Here again, three views have been advanced, which are however mutually exclusive. According to one of them, an ETSI FRAND commitment only creates an obligation to negotiate. A second, opposite, view is that the ETSI FRAND commitment amounts to an offer to conclude a licence on FRAND terms, which can be accepted by any potential licensee, in which case a licence contract will be immediately concluded, even if the parties have not yet negotiated its precise content. The third view is an

¹⁰⁰ See article 1100-1, § 1, of the new *code civil*: 'Juridical acts are manifestations of will intended to produce legal effects. They may be based on agreement or unilateral' See already, before the reform, François Terré, Philippe Simler, Yves Lequette, *Les Obligations*, (11th edn, Dalloz 2013) § 54; Jacques Flour, Jean-Louis Aubert, Eric Savaux, *Droit civil. Les obligations; 1. L'acte juridique*, (16th edn, Armand Colin 2014) § 501.

¹⁰¹ For a recent example in which the existence of an engagement unilatéral has been recognized in the context of contractual negotiations, see Cour de cassation, Première chambre civile, 28 November 2012, no. 11-20674.

¹⁰² See e.g. Christophe Caron, 'Efficacité des licences dites « FRAND » (ou l'indispensable conciliation entre la normalisation et le droit des brevets d'invention grâce à la stipulation pour autrui)', (2013) *Contrats, concurrence, consommation* étude 12.

¹⁰³ See e.g. J. Straus, 'Das Regime des European Telecommunications Standards Institute - ETSI: Grundsätze, Anwendbares Recht und die Wirkung der ETSI gegenüber abgegebenen Erklärungen', in Liber amicorum Kresimir Sajko (Pravni Fakultet Sveucilista u Zagrebu 2012) 45, 68-69 ; M.-R. McGuire, 'Die FRAND-Erklärung. Anwendbares Recht, Rechtsnatur und Bindungswirkung am Beispiel eines ETSI-Standards' (2018) *GRUR* 128, 131-132.

¹⁰⁴ See *Unwired Planet International Ltd v. Huawei Technologies Co. Ltd*, [2017] EWHC 711 (Pat) at [146].

intermediate one, and also the only realistic one. According to it, an ETSI FRAND commitment creates an obligation for the patent owner to negotiate in good faith towards a licensee on FRAND terms.

The first view is that the ETSI FRAND commitment is only a commitment to negotiate in good faith a licence on the SEP subject to the declaration. This view is, however, hardly convincing. An obligation to negotiate is essentially nominal. For indeed, it is a basic rule in almost all legal systems, and certainly in French law, that a party to a negotiation is normally not bound to conclude a contract in the end.¹⁰⁵ In practice, this means that a party who has undertaken only to negotiate can fulfil his obligation simply by sitting at the table, and then declare that he is breaking off negotiations. This amounts to very little and is certainly not enough to ensure that the objectives behind the ETSI IPR are met,¹⁰⁶ i.e. that SEP are made available to those applying ETSI standards and specifications.¹⁰⁷

The second, opposite view – argued before the courts and in some publications¹⁰⁸ – is that an ETSI FRAND commitment constitutes an offer to conclude a license on FRAND terms and conditions for the SEP at issue. Under this perspective, an ETSI FRAND commitment creates a ‘pre-existing virtual license’.¹⁰⁹ A person can get a license just by accepting the offer, i.e. in practice by notifying the SEP owner of his or her intention to conclude a license on FRAND terms.

This interpretation of the FRAND commitment is based on the wording of clause 6.1 of the ETSI IPR Policy which provides that the declaration is an ‘irrevocable undertaking in writing that [the SEP owner] is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory (“FRAND”) terms’. The terms ‘prepared to grant’ are construed as meaning that the manifestation of the will of the SEP owner necessary to create a licence contract already exists when the declaration is made. The licensing contract can thus be concluded as soon as the corresponding will of the other party is manifest, i.e. when the

¹⁰⁵ This is a consequence of freedom of contract, which has been solemnly recognised by the new *code civil*. Article 1102(1) provides: ‘Everyone is free to contract or not to contract, to choose the person with whom to contract, and to determine the content and form of the contract, within the limits imposed by legislation’. As a logical consequence, article 1112(1) sets out: ‘The commencement, continuation and breaking-off of precontractual negotiations are free from control. They must mandatorily satisfy the requirements of good faith’.

¹⁰⁶ Philippe Stoffel-Munck, ‘L’engagement de consentir des licences FRAND : l’exemple de l’ETSI’, in Jean-Pierre Gasnier, Nicolas Bronzo (ed.); *Les nouveaux Usages des brevets d’invention*, tome 2, *Réflexions théoriques et incidences pratiques*, (Presses universitaires d’Aix-Marseille 2016) 107, 116.

¹⁰⁷ See art. 3.1 of the ETSI IPR Policy (Policy Objectives): ‘It is ETSI’s objective to create STANDARDS and TECHNICAL SPECIFICATIONS that are based on solutions which best meet the technical objectives of the European telecommunications sector, as defined by the General Assembly. In order to further this objective, the ETSI IPR POLICY seeks to reduce the risk to ETSI, MEMBERS, and others applying ETSI STANDARDS and TECHNICAL SPECIFICATIONS, that investment in the preparation, adoption and application of STANDARDS could be wasted as a result of an ESSENTIAL IPR for a STANDARD or TECHNICAL SPECIFICATION being unavailable. In achieving this objective, the ETSI IPR POLICY seeks a balance between the needs of standardization for public use in the field of telecommunications and the rights of the owners of IPRs.’

¹⁰⁸ See Christophe Caron, ‘Efficacité des licences dites « FRAND » (ou l’indispensable conciliation entre la normalisation et le droit des brevets d’invention grâce à la stipulation pour autrui)’, (2013) *Contrats, concurrence, consommation* étude 12. no. 14; Philippe Stoffel-Munck, ‘L’engagement de consentir des licences FRAND : l’exemple de l’ETSI’, in Jean-Pierre Gasnier, Nicolas Bronzo (ed.); *Les nouveaux Usages des brevets d’invention*, tome 2, *Réflexions théoriques et incidences pratiques*, (Presses universitaires d’Aix-Marseille 2016) 107, 116.

¹⁰⁹ F. Bourguet & A. Vivès-Albertini, ‘Normalisation et droits de propriété intellectuelle : la difficile cohabitation’ (Oct. 2012) *Propriétés intellectuelles*, no. 45, 295, 298.

potential licensee notifies his or her intention to the SEP owner. According to its proponents, this interpretation is the one that best ensures the fulfilment of ETSI IPR Policy's objectives, i.e. that all parties interested in a licence actually get one.

Several obstacles stand in the way of this interpretation, however. Under almost all legal systems, an offer to conclude a contract can only exist when the declaration of will made by the 'offeror' contains (at least) all the essential elements (the *essentialia negotii*) of the contract that is being considered. What these *essentialia* are depends on the type of contract and on the circumstances of the case. In the case of a license contract for SEPs, the following elements would, *at least*, be regarded as essential: the law applicable to the contract; the patent that is being licensed; the duration of the contract; the geographical scope of the contract; the royalty rate and its mode of calculation; the provision of cross-licenses, when the licensee is himself the owner of SEPs which the licensor wants to practice.

Against this backdrop, an ETSI FRAND commitment can therefore amount to an offer to conclude a license contract only if it contains, explicitly or implicitly, all these elements¹¹⁰. But this is rarely, if ever, the case. For example, probably the most important part of any license contract, i.e. the royalty rate, cannot be deduced from the ETSI FRAND commitment. While the latter explicitly provides that the patent owner must declare that he is prepared to grant a license on FRAND terms and conditions, it does not amount to a predefined royalty rate¹¹¹. Even if a substantial, rather than a procedural, understanding of FRAND is adopted, the FRAND requirement at best defines a range within which the royalty rate must be set,¹¹² but a further agreement between the parties will be necessary to set that royalty rate.¹¹³

It would be a serious encroachment on freedom of contract, which is a basic tenet of French law,¹¹⁴ if the parties were not allowed to strike their own deal and to agree on the price of the license. ETSI has repeatedly made it clear that 'specific licensing terms and negotiations are commercial matters between the companies and shall not be addressed within ETSI'¹¹⁵. Besides, some licensees might wish, and be in a position to obtain, a better deal than others.

Admittedly, in some legal systems, a judge or an arbitrator can step in and set the price of the contract if the parties cannot agree on it, but this does not mean that different judges or arbitrators, especially if they belong to different jurisdictions, would agree on the price of a licence concluded pursuant to an ETSI FRAND commitment. Furthermore, judges and arbitrators do not have this power everywhere. In French law, for example, it is extremely doubtful if a judge can set the price in a licence contract if the parties have proven unable to agree on it.¹¹⁶ This means that, even if one accepts that the FRAND requirement is precise

¹¹⁰ M.-R. McGuire, 'Die FRAND-Erklärung. Anwendbares Recht, Rechtsnatur und Bindungswirkung am Beispiel eines ETSI-Standards' (2018) *GRUR* 128, 132.

¹¹¹ Comp. *Unwired Planet International Ltd v. Huawei Technologies Co. Ltd*, [2017] EWHC 711 (Pat) at [164]

¹¹² See e.g. Chrysoula Pentheroudakis, Justus Baron, 'Licensing Terms of Standard Essential Patents: A Comprehensive Analysis of Cases' (Joint Research Centre 2017) 34 and 159.

¹¹³ See e.g. *TCL v. Ericsson*, No. CV 15-2370 JVS(DFMX) (C.D. Cal. 14 September 2018) at *54.

¹¹⁴ Art. 1102, § 1, code civil: 'Everyone is free to contract or not to contract, to choose the person with whom to contract, and to determine the content and form of the contract, within the limits imposed by legislation'.

¹¹⁵ See recently the ETSI's Director General' public statement on IPR policy, 3 December 2018 <<https://www.etsi.org/newsroom/news/1458-etsi-s-director-general-issues-public-statement-on-ipr-policy>>

¹¹⁶ This is not the case under art. 1164 of the new *code civil*, on which see J.-S. Borghetti, 'Fixation et révision du prix', *Revue des contrats*, hors-série *Le nouveau droit des obligations après la ratification du 20 avril 2018*, June 2018, 25. The solution is less clear under the old *code civil*.

enough for the price of the contract to be regarded as defined in an ETSI FRAND commitment, subject to a further agreement between the parties or to a decision from a judge or arbitrator, this can be true only in those legal systems which accept that the price need not be defined exactly at the time of the conclusion of the contract. But the law applicable to the license contract (and the country whose courts have jurisdiction in case of litigation) is not defined by the ETSI IPR Policy, and must be agreed on by the parties.¹¹⁷

An ETSI FRAND commitment, made pursuant to clause 6.1 of the ETSI IPR Policy, is simply not precise and detailed enough to constitute an offer, in the strict sense of the term. This should come as no surprise, as the ETSI IPR Policy is clearly not intended to dictate the precise content of license contracts between SEP holders and potential licensees.¹¹⁸ The ETSI's Guide on Intellectual Property Rights, which is in effect intended to help interpret the ETSI IPR Policy, makes this very clear.¹¹⁹

It should finally be noted that in *Huawei v. ZTE*, the CJEU implicitly but necessarily interpreted an ETSI FRAND commitment as not constituting a binding offer by the SEP owner to conclude a licence contract, since it ruled that a SEP owner who had taken such an undertaking was obliged, amongst other things, to “make an offer for a license contract under FRAND terms” to a potential licensee, before it could bring an action for infringement of the patent against the latter.¹²⁰ Likewise, in *Unwired Planet v. Huawei*, Birss J expressed the view that “for my part I doubt that the FRAND undertaking can be specifically enforced in such a way that either party could legally be compelled to enter into a contract against their will”.¹²¹

However, the *Huawei v. ZTE* judgment implicitly confirms the validity of the third view, according to which an ETSI FRAND commitment creates an obligation for the SEP holder to negotiate in good faith with potential licensees towards a license on FRAND terms¹²².

Clause 6.1 of the ETSI IPR Policy provides that a SEP holder must give an irrevocable undertaking in writing that he is “prepared to grant” a license on FRAND terms, and not that

¹¹⁷ While the ETSI bylaws and the ETSI IPR Policy are governed by French law, neither clause 6.1 nor any other provision of the Policy set out the national law that should apply to a license contract concluded pursuant to an ETSI FRAND undertaking; see e.g. McGuire (fn 110) 133. This of course as it should be, for there is no reason why such a license contract should necessarily be governed by French law, or any other national law, especially when the SEP or the parties have no specific relationship with France.

¹¹⁸ Other elements stand in the way of recognising an ETSI FRAND commitment as an offer binding on the SEP owner. For example, in certain legal systems, like France's, a valid license contract can only be made in writing (art. L. 613-8(5) of the code de la propriété intellectuelle), which means that the mere acceptance of an offer, whatever the form of this acceptance, is not enough to give rise to a contract, if the agreement of both parties is not made explicit in a document signed by the two of them. This means that, under French law, another act of will than the mere issuance of an ETSI FRAND commitment is in any case necessary, on the SEP owner's part, for a valid license contract to arise.

¹¹⁹ Article 4.1 of the Guide (‘Licensing terms and ex ante disclosure’) provides: ‘Specific licensing terms and negotiations are commercial issues between the companies and shall not be addressed within ETSI. Technical Bodies are not the appropriate place to discuss IPR Issues. Technical Bodies do not have the competence to deal with commercial issues. Members attending ETSI Technical Bodies are often technical experts who do not have legal or business responsibilities with regard to licensing issues. Discussion on licensing issues among competitors in a standard making process can significantly complicate, delay or derail this process’.

¹²⁰ C-170/13, *Huawei v ZTE*, EU:C:2015:477, para 31; see also para 53: “an undertaking to grant licences on FRAND terms creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licences on such terms”.

¹²¹ See *Unwired Planet International Ltd v. Huawei Technologies Co. Ltd*, [2017] EWHC 711 (Pat) at [142].

¹²² See also M.-R. McGuire, ‘Die FRAND-Erklärung. Anwendbares Recht, Rechtsnatur und Bindungswirkung am Beispiel eines ETSI-Standards’ (2018) *GRUR* 128, 134.

he is “granting” or “making an offer for” such a license. This is confirmed by ETSI’s Guide on Intellectual Property Rights, which provides that, under clause 6.1 of the ETSI IPR Policy, third parties have a right “to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard at least to manufacture, sell, lease, repair, use and operate”. Subject to what will be said about the beneficiaries of the ETSI FRAND commitment,¹²³ third parties thus have a *right to be granted* a license on FRAND terms, but they do not already have such a license under clause 6.1. The language used both in the ETSI IPR Policy and the accompanying Guide, though admittedly ambiguous, indicates that the commitment taken by the SEP owner is not an end in itself, but rather the starting point of a process, which should normally result in a license being concluded on FRAND terms.¹²⁴

Since granting a license on FRAND terms means concluding a FRAND license contract, readiness to grant a license necessarily implies an obligation to accomplish such steps as may be necessary to make the conclusion of such a contract possible. In a business context where the conclusion of contracts can only be the result of negotiations, to negotiate is obviously one of these steps. By taking an ETSI FRAND commitment, a SEP owner thus undertakes an obligation to negotiate with potential licensees with a view to concluding a license on FRAND terms.

It is well established in French law that negotiations must be carried out in good faith, even when the parties have not formally undertaken to do so.¹²⁵ Given the general duty to negotiate in good faith that exists in French law, a formal undertaking to negotiate implies an obligation to negotiate in good faith. The obligation undertaken by a SEP owner through an ETSI FRAND commitment is therefore to negotiate in good faith with potential licensees towards a license on FRAND terms. Needless to say, this obligation is different from a mere obligation to enter discussions. But it does not imply an absolute obligation to conclude a FRAND license.

First of all, the SEP owner who has taken a FRAND commitment is not free to break off negotiations at any time, as is normally the case in ‘ordinary’ negotiations. He has declared that he was ready to grant a license, and, if he does enter into negotiations with a potential licensee, then he must be ready to negotiate until a license is concluded, or until it becomes clear that, despite his acting in good faith, the negotiations will not result in a voluntary FRAND license (as when, for example, a potential licensee refuses to negotiate in good faith).

Negotiating is not a unilateral process. Negotiations can only go forth if the two parties are actually willing to negotiate. Besides, under French law, the good faith requirement applies to all those entering or taking part in negotiations, regardless of whether they do so pursuant to a prior undertaking. For the negotiations to reach their aim, i.e. the conclusion of a license on

¹²³ See *infra* 4.1.3.

¹²⁴ Chrysoula Pentheroudakis, Justus Baron, ‘Licensing Terms of Standard Essential Patents: A Comprehensive Analysis of Cases’ (Joint Research Centre 2017), 33. Some authors have analysed FRAND commitments (though not specifically ETSI’s) from an economic point of view as ‘incomplete contracts’: Joanna Tsai, Joshua Wright, ‘Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts’ (2015) 80 Antitrust LJ 157.

¹²⁵ The rule, which had been recognized in case law, is now explicitly set out at article 1104 of the new code civil, which provides: ‘Contracts must be negotiated, formed and performed in good faith. | This provision is a matter of public policy’. And article 1112, par. 1, adds on: ‘The commencement, continuation and breaking-off of precontractual negotiations are free from control. They must mandatorily satisfy the requirements of good faith’.

FRAND terms, it is therefore necessary that both the SEP owner who takes an ETSI FRAND commitment and the potential licensee negotiate in good faith.¹²⁶ If the potential licensee refuses to negotiate, or does not negotiate in good faith, he makes it impossible for a license to be concluded.

Secondly, the SEP owner who has taken an ETSI FRAND commitment must negotiate towards the conclusion not just of a contract, as is normally the case in a negotiating process, but towards a contract whose terms are FRAND. This sets a further limit to the SEP owner's freedom. Not only is he not free to break off negotiations at any time, but he is also not free to keep demanding non-FRAND terms over the course of the negotiation for a potential license.

This means that, if the SEP owner who has made an ETSI Declaration initiates negotiations with a potential licensee, and if the other party proves to be cooperative and demonstrates his own good faith, the patent owner must at some point during the negotiations make an offer for the conclusion of a license contract under terms that are FRAND.

3.1.3 Who are the beneficiaries of an ETSI FRAND commitment?

The question here is whether ETSI's FRAND commitment requires the SEP holder to grant a license to anyone who requests so (including component manufacturers), or is the SEP holder free to choose at which level of the production chain to license? One way to answer it might be to rely the non-discriminatory prong of the FRAND requirement, but this is in fact a dead-end (4.1.3.1). One must therefore turn to the text and context of the ETSI FRAND commitment (4.1.3.2).

3.1.3.1 The non-discriminatory prong of the ETSI FRAND commitment

Some authors have argued that non-discrimination in the context of a FRAND commitment means that anybody interested in a licence, whatever their position in the production chain, is entitled to a license.¹²⁷ This view can hardly be accepted in the context of the ETSI commitment, however.

Non-discrimination is a principle of French contract law, but it only applies in certain contexts and for certain types of discrimination, when the law so provides.¹²⁸ And to treat differently companies holding different positions in the production chain is definitely not a discrimination prohibited by French law. It is in theory possible to contractually agree on an extension of the non-discrimination requirement, for the benefit of certain third parties. The intention to do so needs to be clear, however; and there is no evidence that the non-

¹²⁶ See e.g. Court of Appeal of The Hague, 7 May 2019, *Philips v. Asus*, case n. 200.221.250/01, esp. at [4.179].

¹²⁷ Denis Carton, Allan Shampine, 'An Economic Interpretation of FRAND' (2013) 9 *Journal of Competition Law & Economics* 531, 546; Stefano Barazza, 'Licensing Standard Essential Patents Part One: the Definition of FRAND Commitments the Determination of Royalty Rates' (2014) 9 *Journal of Intellectual Property Law & Practice* 465, 471; Jorge Contreras, 'A Brief History of FRAND: Analyzing Current Debates in Standard Setting and Antitrust through a Historical Lens' (2015) 80 *Antitrust LJ* 39, 74 ff.; Roberto Grasso, 'Standard Essential Patents: Royalty Determination in the Supply Chain' (2017) 8 *Journal of Competition Law & Practice* 283, 292.

¹²⁸ See e.g. Muriel Fabre-Magnan, *Droit des obligations. 1 – Contrat et engagement unilatéral*, (4th edn, PUF 2016) § 97. Interestingly, the prohibition of unlawful discriminations has not been explicitly formulated in the new *code civil* provisions on contract law.

discrimination requirement in the ETSI FRAND commitment is intended to grant a right to a license to all those along the production chain.

The non-discrimination requirement means that those who are subject to it are not entitled to treat differently persons in the same or similar situation, on the basis of differences between them which are not legally relevant. If the law does not define how the ‘sameness’ of the situation is to be understood, and what differences are to be regarded as irrelevant, it is obviously for the parties who agree on an extension of the non-discrimination requirement to do so. In the context of the ETSI FRAND commitment, it may be that producers at the same level of the production chain are in the same position vis-à-vis the patent holder,¹²⁹ in which case the latter should not discriminate between them. On the other hand, producers at different levels of the production chain do not appear in the same position, since the elements or devices which they produce are not the same, and they rely on the SEP in different ways. The discussions about how royalty rates should be calculated depending on the type of items which are manufactured by would-be licensees, actually show that the different positions in the production chain are considered as legally significant, and likely to have an impact on the terms of the licenses that are concluded, notwithstanding the FRAND requirement. This means that, as a first approach, the non-discrimination prong of the ETSI FRAND commitment cannot be understood as requiring that all those in the production chain be treated in the same way, and thus be granted a right to obtain a license.

Whether the ETSI FRAND Policy endorses the LTA approach cannot be decided on the mere fact that it requires that licence be granted on ‘non-discriminatory’ terms. Taken out of context, this notion is surely much too vague. One needs to consider the whole Policy to see if it contains other elements shedding light on this issue, and also to have regard to the intention of those who adopted it.

3.1.3.2 *The text and context of the ETSI FRAND commitment*

There is a debate on the meaning and intention behind the ETSI FRAND commitment, which has been fuelled by the contradicting positions taken by two persons closely associated with the ETSI, namely its former director-general Karl Heinz Rosenbrock, and a former member of the ETSI IPR Committee, Dr Bertram Huber.¹³⁰ The former basically claims that an undertaking made pursuant to clause 6.1 of the ETSI IPR Policy beneficiates any interested party, including upstream component manufacturers,¹³¹ whereas the latter takes the opposite position, and argues that the drafters of the ETSI IPR Policy only intended to confirm the

¹²⁹ This is not necessarily the case, however, since producers at the same level of production may differ in size, location, cross-licensing position, etc., and these differences, or some of them, may be significant from a royalty-setting perspective.

¹³⁰ On this debate and the various arguments put forward, see J. Martinez, ‘FRAND as Access to All versus License to All’, (2019) *GRUR* 633, 635 ff.

¹³¹ K. H. Rosenbrock, ‘Why the ETSI IPR Policy Requires Licensing to All’ (2017), available at <http://www.fair-standards.org/wp-content/uploads/2017/08/Why-the-ETSI-IPR-Policy-Requires-Licensing-to-All-Karl-Heinz-Rosenbrock-2017.pdf> (last accessed 26 July 2019); *ead.*, ‘Licensing At All Levels Is The Rule Under The ETSI IPR Policy: A Response to Dr. Bertram Huber’ (2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3064894 (last accessed 26 July 2019).

industry policy at the time when the Policy was adopted, and which was to grant license only at the end-user level¹³².

The debate revolves for the most part around clause 6.1 of the ETSI IPR Policy. This clause provides:

“When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory (“FRAND”) terms and conditions under such IPR to at least the following extent:

- MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE;
- sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED;
- repair, use, or operate EQUIPMENT; and
- use METHODS [...]”.

At clause 15, the ETSI IPR Policy further defines “MANUFACTURE” as the “production of ‘EQUIPMENT’”, and “EQUIPMENT” as “any system, or device fully conforming to a STANDARD”.

More precisely, the core question is whether the word “equipment” at clause 6.1 covers all types of devices, or only end-user devices. If the first answer is retained, then the ETSI FRAND commitment might lead to an LFA solution, while the second answer would mean that the “right to be granted a license on FRAND terms” is actually vested only on manufacturers of end-user devices.

The text of clause 6.1 does not provide a clear answer to that question, however.¹³³ Since its terms are not “clear and unambiguous”,¹³⁴ clause 6.1 calls for an interpretation. Again, this interpretation should be carried out in accordance with the rules of French law, since it is that law which governs the ETSI IPR Policy.

It is a clear rule, under French law, that a contract should be interpreted in accordance with the parties’ intention when entering that contract. This applies to all agreements which are contractual in nature, including the bylaws of an association. Only when the intention of the parties cannot be discerned should regard be had to the meaning, which a reasonable person would give to the disputed terms. Article 1188 of the new code civil thus provides:

“A contract is to be interpreted according to the common intention of the parties rather than stopping at the literal meaning of its terms.

Where this intention cannot be discerned, a contract is to be interpreted in the sense which a reasonable person placed in the same situation would give to it.”

¹³² B. Huber, ‘Why the ETSI IPR Policy Does Not and Has Never Required Compulsory ‘License to All’: A Rebuttal to Karl Heinz Rosenbrock’ (2017), available at: <https://www.iptalks.eu/news/why-the-etsi-ipr-policy-does-not-and-has-never-required-compulsory-license-to-all-a-rebuttal-to-karl-heinz-rosenbrock> (last accessed 26 July 2019).

¹³³ See J. Martinez, ‘FRAND as Access to All versus License to All’, (2019) *GRUR*, 633, 635. See also, apparently sharing this view: *HTC v. Ericsson*, no. 6:18-CV-00243-JRG (E.d. Tex. 7 January 2019).

¹³⁴ Art. 1192 of the new *code civil*: ‘Clear and unambiguous terms are not subject to interpretation as doing so risks their distortion’.

To ascertain the meaning of the word “equipment” at clause 6.1 of the ETSI IPR Policy, one must therefore have regard to the intention of the parties who have adopted the ETSI IPR Policy, i.e. the members of the ETSI at the time of its adoption and subsequent modifications, in so far as the latter can be regarded as having confirmed clause 6.1. If these intentions cannot be ascertained, then one should turn to an “objective” interpretation, i.e. to the meaning which a reasonable person would give to clause 6.1.

The intention of the parties

Obviously, it is not easy to identify the intentions of the hundreds of members of the ETSI, who have adopted its IPR Policy. One could rely here on the testimonies of those who have been involved in the process of drafting and adopting the policy,¹³⁵ but Rosenbrock and Huber seem to have conflicting memories in that respect. Rosenbrock wrote: “I was closely involved in the creation and approval of the ETSI IPR Policy from 1990 to 1994, and have followed further discussions within ETSI. In my experience, there was no common “intent” at the time of the adoption of the policy to allow SEP owners to refuse to license upstream, either to reflect any purported “prevailing industry practice” or otherwise. To the contrary. The whole idea was that if a FRAND promise was made, everyone was entitled to a FRAND license.”¹³⁶ But Huber wrote: “At the time the Policy was developed, debated, drafted, and adopted, the drafters were well-aware of the difference between end-products that fully comply with a standard and components of those end-products, and this makes the language that was selected for use in the Policy particularly revealing. By using the terms “system”, “device”, and “fully compliant” – words that connote finished products rather than individual components – in the definition of EQUIPMENT, and defining MANUFACTURE as the production of such EQUIPMENT, the drafters intended for the FRAND undertaking to extend to end-products, but not components of those end-products, consistent with the prevailing industry practice at the time”.¹³⁷

In the absence of other testimonies as to the intention of the parties who adopted the ETSI IPR Policy, it is difficult to tell which of the two above-mentioned recollections is the most reliable.¹³⁸ It is undisputed, however, that elements that are posterior to the conclusion of the contract, such as the behaviour of the parties, can be used to shed light on the parties’ intention, and thus to interpret the contract.¹³⁹ Here, the fact that ETSI has apparently resisted proposals to modify its IPR Policy in order to explicitly acknowledge that SEP owners should

¹³⁵ Under French law, apart from cases for which legislation provides otherwise, proof may be established by any means (art. 1358 of the new *code civil*), which include declarations made by third parties, whose probative value is left to the assessment of the court (art. 1381 of new *code civil*).

¹³⁶ K. H. Rosenbrock, ‘Why the ETSI IPR Policy Requires Licensing to All’ (2017), available at <http://www.fair-standards.org/wp-content/uploads/2017/08/Why-the-ETSI-IPR-Policy-Requires-Licensing-to-All-Karl-Heinz-Rosenbrock-2017.pdf>, 7.

¹³⁷ B. Huber, ‘Why the ETSI IPR Policy Does Not and Has Never Required Compulsory ‘License to All’: A Rebuttal to Karl Heinz Rosenbrock’ (2017), available at: <https://www.iptalks.eu/news/why-the-etsi-ipr-policy-does-not-and-has-never-required-compulsory-license-to-all-a-rebuttal-to-karl-heinz-rosenbrock>, 5.

¹³⁸ One might confront these recollections to the existing industry practice at the time of the adoption of the ETSI IPR Policy, if one assumes that the closer the recollection to this practice, the more accurate it probably is. In the absence of a clear picture of what the parties’ intention was, however, industry practice at the time should be taken into account directly (see next section), and not just as a way to assess the reliability of a testimony.

¹³⁹ See e.g. Cass. civ. 1, 13 December 1988, no. 86-19068, Bull. civ. I, no. 352; Cass. com., 12 October 1993, no. 91-13966, Bull. civ. IV, no. 440.

be ready to grant licenses also to component-makers – whereas the IEEE has recently officially endorsed the LTA approach¹⁴⁰ – would suggest that the initial intent of the ETSI members was indeed to grant a right to a license only at the end-user device level.

The reasonable person's interpretation

Should this element not be considered as convincing, the situation is one where, in the words of article 1188(2) of the *code civil*, the intention of the parties cannot be discerned, and where the “contract is to be interpreted in the sense which a reasonable person placed in the same situation would give to it”. The standard of the “reasonable person placed in the same situation” means that the ETSI IPR Policy should be interpreted from the perspective of someone familiar with the telecom industry, as well as with the manufacturing and licensing practices that were common in this industry, at the time when the Policy was adopted.

It seems that, at the time when the ETSI IPR Policy was adopted, the common practice in the telecom industry was to grant licenses at the end-user device level, and not at the component level.¹⁴¹ It can therefore be assumed that, absent a clear indication that the ETSI IPR Policy intended to depart from this practice, a reasonable person familiar with the industry would have interpreted the Policy as simply confirming this practice, and thus seeking only to guarantee licensing at the end-device level.¹⁴²

Besides, a reasonable person would probably pay attention to the fact that, notwithstanding that manufacturers of end-products commonly rely on sub-contractors to provide them with the component parts they use, the ETSI IPR Policy uses the word “device”, and avoids words such as “element”, “component”, “part”, or “unit”. This would suggest, for a reasonable person and regardless of the actual intention of the ETSI members, that the ETSI IPR Policy should be interpreted as being aimed at the granting of licenses at the end-user device level, and not at the component level. This ‘objective’ interpretation is corroborated by the fact that clause 15 of the ETSI IPR Policy defines “equipment” as “any system, or device fully conforming to a standard”. While Rosenbrock and Huber seem to disagree as to what a “device fully conforming to a standard” may be,¹⁴³ it seems that such a device is more likely to be an end-user device, since standards are often intended to enable the connection between different end-user devices, and do not focus on the components themselves.¹⁴⁴

It should also be taken into account that, according to article 1194 of the new code civil, “usage” can be a source of the contract’s content. Usage, in the sense of article 1194, is any

¹⁴⁰ The Institute of Electrical and Electronics Engineers (IEEE) standards association is another SSO; see the IEEE-SA Standards Board Bylaws, § 6, available at <https://standards.ieee.org/about/policies/bylaws/sect6-7.html> (last accessed 26 July 2019).

¹⁴¹ See e.g. K. Kjelland, R. Brooks & X. Zhang, ‘FRAND Licensing of Standard Essential Patents’, in M. L. Drapkin et al. (eds), *Patents and Standards Practice, Policy, And Enforcement*, Bloomberg Law Book Division 2018, 11-8; N. V. Siebrasse & T. F. Cotter, ‘Judicially Determined FRAND Royalties’, in J. L. Contreras (ed.), *The Cambridge Handbook of Technical Standardization Law* (Cambridge University Press 2018) 374–75, 377–86 (both cited in *HTC v. Ericsson*).

¹⁴² See *HTC v. Ericsson*, no. 6:18-CV-00243-JRG (E.d. Tex. 7 January 2019) at *5.

¹⁴³ B. Huber, ‘Why the ETSI IPR Policy Does Not and Has Never Required Compulsory ‘License to All’: A Rebuttal to Karl Heinz Rosenbrock’ (2017), 5; K. Rosenbrock, ‘Licensing At All Levels Is The Rule Under The ETSI IPR Policy’ (2017) 9.

¹⁴⁴ J. Padilla & K. W. Wong-Ervin, ‘Portfolio Licensing to Makers of Downstream End-User Devices: Analyzing Refusals to License FRAND-Assured Standard-Essential Patents at the Component Level’ (2017) *The Antitrust Bulletin*, 494, 500-501.

practice sufficiently firmly established in any given trade or field of activity, so that it can be regarded as being incorporated in any contract concluded in that field, if the parties have not explicitly waived its application. As far as licenses in the telecom industry are concerned, since licensing on an end-user device basis is the common and long-standing practice of the industry, or at least was at the time when the ETSI IPR Policy was adopted, it could be argued that an ETSI FRAND commitment contains a term implied by usage whereby the licenses which the IPR holder has undertaken to grant are for the manufacturing of end-user devices, and not for the manufacturing of components.

3.1.4 Conclusion

Whether one adopts a subjective or an objective interpretation of clause 6.1 of the ETSI IPR Policy, the conclusion seems to be that this provision should be interpreted as acknowledging a “right to be granted a license on FRAND terms and conditions” only to manufacturers of end-user devices, and not to all operators of the production chain, including component makers.

This does not mean, of course, that SEP owners are not *allowed* to license their SEPs to component makers under the ETSI IPR Policy. The conclusion is simply that, pursuant to the ETSI FRAND commitment, SEP owners are only *bound* to negotiate in good faith towards a license on FRAND terms with *manufacturers of end-user devices*, when they intend to assert the patent. Therefore, under French contract law, the ETSI IPR Policy cannot be interpreted as implementing an LTA approach.

3.2 Other Standard Setting Organisations

Besides ETSI there are many other SSOs with different IPR Policies. Whether there exists an LTA obligation would depend on the precise wording of the FRAND commitment given to relevant SSOs. We observed two categories of SSOs, one that make it explicitly clear that the SEP holder is required to license to component manufacturers, and others that have unclear and ambiguous wording which does not lend to such conclusion.

An example of the first category is IEEE, a major standard setting organisation responsible for development of many important technological standards, such as Wi-Fi. IEEE’s FRAND commitment explicitly provides that “the Submitter will make available a license for Essential Patent Claims to an unrestricted number of Applicants ... to make, have made, use, sell, offer to sell, or import *any Compliant Implementation* that practices the Essential Patent Claims for use in conforming with the IEEE Standard.”¹⁴⁵ Compliant Implementation is further defined as “*any product (e.g., component, sub-assembly, or end-product)* or service that conforms to any mandatory or optional portion of a normative clause of an IEEE Standard.”¹⁴⁶ Given the explicit definition of “Compliant Implementation” as including components, the SEP holder giving FRAND commitment at IEEE could not refuse to license its patents to component manufacturers upon their request. While such policy leaves arguably impose a contractual duty

¹⁴⁵ IEEE, Standards Boards Bylaws (March 2019) p. 17.

¹⁴⁶ Ibid, p. 15.

on a submitter of IEEE's FRAND commitment to license to all levels of a production chain, some companies have refused to commit their patents to this new IPR policy,¹⁴⁷ and it remains to be seen how the license to all approach will be implemented in practice.

The second category of SSOs leave it ambiguous whether they impose a requirement to licence to all. A common version of such FRAND commitment is to require licences to be available to "unrestricted number of applicants" or to "all applicants." This is the case with the ITU-T, ISO and IEC's FRAND commitment which provides that the "Patent Holder is prepared to grant a license to an *unrestricted number of applicants* on a worldwide, non-discriminatory basis and on reasonable terms and conditions to make, use and sell implementations of the above document."¹⁴⁸ TIA's FRAND commitment similarly provides that "the license rights ... will be made available to *all applicants* under terms and conditions that are reasonable and non-discriminatory."¹⁴⁹ However, who can be considered as an "applicant" is left undefined, which opens room for interpretations. On the one hand, such broad wording could arguably encompass companies at all levels of the production chain, and SEP owners giving such commitments could be required to offer license to component manufacturers should they requests so. On the other hand, as we have seen in Section 3, not all SEPs claim one single component, meaning a component might not be fully implementing all features of the standard. It could be argued then that 'applicants' could only be fully compliant downstream producers, and component manufacturer would not need a licence if they are selling to licensed final product manufacturers. An argument for such interpretation could be found in the further wording of FRAND commitment providing that licenses will be given for the 'implementation of a standard'. For instance, ITU-T, ISO and IEC, as noted above, require FRAND licences for the "implementation" of standards,¹⁵⁰ ANSI similarly compels licences only "for the purpose of implementing the standard",¹⁵¹ while TIA provides that licences shall be made available "only to the extent necessary for the practice of any or all of the Normative portions for the field of use of practice of the Standard."¹⁵² Such limitations are arguably in place to constrain the availability of licences only to full compliant implementations of a standards, which are often only end-devices, not necessarily chips.

While there is no EU case to date dealing with these issues, some US courts had the opportunity to interpret IPR Policies of these SSOs and came to conflicting conclusions. For

¹⁴⁷ Some studies report that a large number of companies are unwilling to license their SEP in accordance with the new IPR Policy. See Ron Katznelson, 'The IEEE Controversial Policy on Standard Essential Patents – the Empirical Record Since Adoption' (September 2017) available at <<https://works.bepress.com/rkatznelson/80/>>; Keith Mallinson, 'Development of Innovative New Standards Jeopardised by IEEE Patent Policy' (September 2017) available at <https://www.4ipcouncil.com/application/files/6015/0479/2147/Mallinson_IEEE_LOA_report.pdf>; for contrary conclusions that IEEE's new IPR Policy had no impact on standardisation activities see Tim Pohlman, 'Empirical Study on Patenting and Standardization Activities at IEEE' (March 2017) available at: <https://www.iplytics.com/wp-content/uploads/2018/01/IPLYtics_2017_Patenting-and-standardization-activities-at-IEEE.pdf>.

¹⁴⁸ ITU-ISO-IEC, Patent Statement and Licensing Declaration Form for ITU-T, ITU-R Recommendation, ISO or IEC Deliverable (26 June 2015).

¹⁴⁹ TIA, Intellectual Property Rights Policy (21 October 2016) p. 8.

¹⁵⁰ ITU-ISO-IEC, Patent Statement and Licensing Declaration Form for ITU-T, ITU-R Recommendation, ISO or IEC Deliverable (26 June 2015).

¹⁵¹ ANSI, 'Essential Requirements: Due Process Requirements for American National Standards' (January 2019) p. 11.

¹⁵² TIA, Intellectual Property Rights Policy (21 October 2016) p. 8.

example, in *Microsoft v Motorola*, the US court held that ITU-T, ISO and IEC's FRAND commitment that required licences to be available to an "unrestricted number of applicants" as covering all companies unrelated to their position in the supply chain.¹⁵³ On the other hand, the district court in *Ericsson v D-Link* interpreting the similar wording of IEEE's previous FRAND commitment came to the opposite conclusion. It accepted Ericsson's arguments that by adopting a policy of licensing only "fully compliant" downstream products it was indirectly licensing chip manufacturers.¹⁵⁴ The district court held that there is nothing inherently wrong or unfair with Ericsson's policy of licensing only fully compliant products, other large companies have adopted similar policies and that there is nothing in previous IEEE IPR Policy that would require otherwise.¹⁵⁵ The most recent case came from an ongoing dispute between the FTC and Qualcomm. The court interpreted Qualcomm's FRAND commitments given to ATIS and TIA as requiring it, as a matter of contract law, to offer licences to competing chip manufacturers.¹⁵⁶ After considering the language of FRAND commitments that required licenses to "all applicants" the court found the meaning unambiguous and applying to component manufacturers as well.¹⁵⁷ It held that Qualcomm owns SEPs that are infringed by modem chips and that these chips are sold for the purpose of implementing the standard.¹⁵⁸ However, while it is true that some SEPs from the portfolio read on modem chips, not all SEPs are implemented only in a components. As seen, SEPs are often much broader, covering end-devices and whole networks. The result of such ruling might lead to inefficient portfolio splitting, as will be explained in Section 7.

3.3 Conclusion

In conclusion, the contractual obligation on the SEP owner to license to all primarily depends on the precise wording of the FRAND commitment which varies between SSOs. Some SSOs, like IEEE, explicitly provide that SEP owners are required to license to all interested companies at any level of the production chain, some like ETSI appear to not impose such obligation on SEP owners, while others have more ambiguous wording. In our view, unless IPR Policies make it explicitly clear that the SEP owner is required to grant licences to any company that requests so, regardless of its position in the production chain, it would be wrong to impose an LTA obligation through wide contractual interpretations. This is so given that: i) SSOs could change their policies to clearly provide license to all obligation as IEEE did; ii) the wide industry practice in case of SEPs appears to be licensing on downstream level, and iii) SEPs have wide claims that are not necessarily implemented in one single chip.

¹⁵³ *Microsoft v Motorola* 696 F.3d 872 (Ninth Cir. 2012) 884 ("language admits of no limitations as to who or how many applicants could receive a license ("unrestricted number of applicants") or as to which country's patents would be included").

¹⁵⁴ *Ericsson v D-Link*, 2013 WL 4046225 (E.D. Texas 2013) 23-24.

¹⁵⁵ *Ibid.*, 24.

¹⁵⁶ *FTC v Qualcomm* Case 5:17-cv-00220-LHK (N.D. Cal. 2018) (Order Granting FTC's Motion for Partial Summary Judgment).

¹⁵⁷ *Ibid.*

¹⁵⁸ *Ibid.*, 25.

4 Competition Law

The last legal question to consider – and not the least – is whether EU competition law provides a legal basis to impose an obligation to license to all. Though some foreign agencies and courts have applied domestic competition law to impose on vertically integrated SEP holders a duty to license component manufacturers,¹⁵⁹ there is yet no EU case to date.¹⁶⁰ Yet, some scholars have claimed that the EU competition rules impose similar obligations on SEP holders.¹⁶¹ This section thus reviews whether EU competition law imposes a specific competition law duty to license SEPs at any level of the production chain

4.1 Abuse of dominant position (Article 102 TFEU)

EU competition law recognises the principle that a firm has the right to choose its trading partners and to dispose freely of its property.¹⁶² Any competition law limitation on freedom to contract and the right to private property can only be imposed after careful consideration, and certainly not impinge on the *existence* of such rights.¹⁶³ This applies equally to intellectual property, whose protection is guaranteed by the EU Charter on Fundamental Rights.¹⁶⁴ The practical implication is that compulsory licencing has remained more the exception than the rule in EU competition law.

EU competition law nonetheless provides for a limited derogation to the right to freely *exercise* intellectual property rights. In “*exceptional circumstances*”, a refusal to license

¹⁵⁹ US courts and competition authorities in Asia had the opportunity to decide on the application of their competition law. Competition law duty to deal with all levels of production chain appears to be primarily the view in Asia Jurisdictions. See in India, Gregory Sidak, ‘FRAND in India’ in Jorge Contreras (ed.), *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust and Patents* (Cambridge University Press 2018) (showing how the Competition Commission of India in cases brought against Ericsson based on the complaints of Indian handsets manufacturers considers licensing on the end-product devices as anti-competitive); In South Korea, Qualcomm was found to have abused dominant position by refusing to license its SEPs to chipset manufacturers, see Se Young Lee, Stephen Nellis, ‘South Korea fines Qualcomm \$854 million for violating competition laws’ (28 December 2016) *Reuters*; In Taiwan, Qualcomm was also found to have abused dominant position by refusing to license its SEPs to chipset manufacturers, however, the case settled without definite ruling liability, see: Tim Bradshaw, Edward White, ‘Qualcomm Settles \$774 Million Antitrust Dispute in Taiwan’ (10 August 2018) *Financial Times*. In Japan, the Japan Fair Trade Commission in 2016 issued Guidelines which appear to consider as an unfair trading practice a refusal to license SEPs to any party willing to take a license, presumably also including component manufacturers. See Japan Fair Trade Commission, Guidelines for the Use of Intellectual Property under the Antimonopoly Act (2016), part 4 (2) (iv). In the US, the FTC sued Qualcomm, a leading producer of 3G/4G modem chips and one of the largest holders of cellular SEPs portfolio, for several anti-competitive practices, including for refusing to license its SEPs to rival chip manufactures and licensing only to downstream final product manufacturers. See *FTC v Qualcomm*, Case No. 17-CV-00220-LHK (N.D. Cal. 2017). The first instance court found that such practice is indeed against US antitrust laws. See *FTC v Qualcomm*, Case 5:17-cv-00220-LHK (N.D. Cal. 2019). The first instance-judgement is currently under appeal.

¹⁶⁰ In the UK Apple sued Qualcomm alleging abuse of dominant position by not licensing its SEPs to chip manufacturers. The parties have settled their dispute before the court had the opportunity to decide on this issue. See: *Apple v Qualcomm*, [2018] EWHC 1188 (Pat). See also Pat Treacy, Alex Calver, ‘Apple’s Battle with Qualcomm Spreads to the UK’ (1 September 2017) *Lexology* (describing the allegations against Qualcomm).

¹⁶¹ For possible EU competition law intervention see: Renato Nazzini, ‘Level Discrimination and FRAND Commitments Under EU Competition Law’ (2017) 40 *World Competition* 213.

¹⁶² Commission Enforcement Priorities; AG Jacobs in *Oscar Bronner C-7/97* EU:C:1998:264.

¹⁶³ *Ibid.*

¹⁶⁴ See Article 17(2) of the Charter.

intellectual property rights may be deemed an abuse of dominant position.¹⁶⁵ In *Magill*, *IMS Health* and *Microsoft*, the EU courts have held that the following criteria had to be met to lead to impose a duty to license IPRs on a dominant firm: i) its refusal to license IPRs relates to a product or service that is indispensable to the exercise of a particular activity on a neighbouring market; ii) the refusal to license IPRs is of such kind to exclude any effective competition on that neighbouring market; iii) the refusal to license IPRs prevents the appearance of a new product for which there is a potential consumer demand.¹⁶⁶

Against this background, there is no clear-cut case of abuse when a SEP holder licenses SEPs only at the end-device level and thus indirectly licenses component manufacturers.¹⁶⁷ To start, observed empirical realities are inconsistent with this idea. In the smartphone industry, we have witnessed rapid entry of new market players, vigorous downstream competition and an overall decrease in consumer prices.¹⁶⁸

Besides, licensing directly to component manufacturers would hardly be indispensable under the first condition. An often-encountered non sequitur in the literature consists in conflating a refusal to grant a license with a refusal of access to the standard. This is both logically and empirically wrong: to start, it is not true that simply not having a licence prevents others from using and producing standardised products. As we can see from real life, SEPs licensing agreement are often concluded *after* companies started bringing a product to the market. The SEP owner can only prevent others from using the patent if it goes to court and successfully sues for an injunction. However, in practice, going to court and obtaining an injunction are not a given fact. In fact, it is almost a rare phenomenon for an SEP holder to get an injunction. Not all SEP holders are able to license and/or willing to sue, owing to transaction costs of both licensing and litigation. Any revenue return from a licence may not justify the costs of negotiating it and all other similarly situated parties, and in litigation courts may find

¹⁶⁵ See C/241/91 P *RTE and ITP v Commission* EU:C:1995:98; C-7/97 *Oscar Bronner v Media Print* EU:C:1998:569; C-418/01 *IMS Health v NDC Health* EU:C:2004:257; T-201/04 *Microsoft v Commission* EU:T:2007:289.

¹⁶⁶ T-201/04 *Microsoft v Commission* EU:T:2007:289, para 332; see also Commission, ‘Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings’ (Communication) [2009] OJ C 45/7 para. 81. (the European Commission will consider the following legal test in deciding to bring the case in refusal to license cases: i) the refusal to license relates to a product or service that is objectively necessary to be able to compete effectively on a downstream market; ii) the refusal to license is likely to lead to the elimination of effective competition on the downstream market, and iii) the refusal is likely to lead to consumer harm”).

¹⁶⁷ See also Jorge Padilla, Koren Wong-Ervin, ‘Portfolio Licensing to Makers of Downstream End-User Devices: Analyzing Refusals to License FRAND-Assured Standard-Essential Patents at the Component Level’ (2017) 62 *Antitrust Bulletin* 494 (reaching the same conclusion). For different argument see Roberto Grasso, ‘Standard Essential Patents: Royalty Determination in the Supply Chain’ (2017) 8 *Journal of European Competition Law & Practice* 283.

¹⁶⁸ See Alexander Galetovic, Stephen Haber, Lew Zaretski, ‘Is There an Anti-Commons Tragedy in the Smartphone Industry’ (2018) 32 *Berkeley Technology Law Journal* 1527 (that the number of smartphone devices sold each year is increasing by 20.1% per year on average, with 1.474 billion smartphone devices being sold only in 2016); Keith Mallinson, ‘Don’t Fix What Isn’t Broken: The Extraordinary Record of Innovation and Success in the Cellular Industry Under Existing Licensing Practices’ (2016) 23 *George Mason Law Review* 967 (finding highlevels of R&D and innovation in ICT industry; new entrants and exists in the market and industry concentration has declined over time from a highly concentrated to an unconcentrated market); Alexander Galetovic, Stephen Haber and Ross Levine, ‘An Empirical Examination of Patent Holdup’ (2015) 11(3) *Journal of Competition Law & Economics* 549 (finding that SEP-reliant products have experienced faster price declines than any other goods from 1997 to 2013 and that , the average price of a phone in 2013 was 79% lower than in 1997).

in favour of the implementer. A patent believed by the SEP holder as valid and essential may still be deemed invalid or non-essential by a court after very costly arguments from both sides. An injunction may not be granted, granted on condition of onerous escrow deposits, only granted for a short period, not enforced or overturned on appeal. With this background, a refusal to grant a license cannot (and does not) by itself lead to an implementer's market exclusion. And in fact, observed empirical occurrences of patent holdout suggest that injunctions fail in a non-trivial number of cases.¹⁶⁹ In this context, the competition law theory of 'refusal to license' which effectively equates exclusion from a license to exclusion from the market, is not apposite to the situation where a SEP holder refuses to grant a patent license but makes the patented technology available otherwise.

Besides, with or without a license, component manufacturers are not precluded from selling their products to downstream manufacturers. Put differently, nothing prevents component suppliers from selling chips to end product manufacturers, who will take a SEP license and thus indirectly cover the entire production and distribution chain. Even if a SEP holder decided to sue component suppliers, the latter could counter any patent infringement claims by arguing that SEPs are covered by "have made" rights by selling them to licensed end product manufacturers.¹⁷⁰

In reality, a successful refusal to licence case would require an extreme set of facts. For example, an SEP holder refuses to license all and any third party, and reserves for itself the manufacture of standard-compliant products. In such a scenario, the three conditions defined in the case law are *prima facie* fulfilled. Yet, the scenario is extreme in the sense that no SEP holder to date appears to have taken such a radical position. And for good reason. Given the repeated nature of standard setting, a SEP holder of this kind would likely be punished by exclusion from most standardisation organisations.

Recognising the limitations of the refusal to license doctrine, some authors suggests that a competition law duty to license component manufacturers may arise out of *Huawei v ZTE* case which concerned the use of injunctions for the infringement of SEPs.¹⁷¹ There the CJEU held that particular circumstances of the case involving SEPs that are encumbered by the FRAND commitment justify restricting the use of injunctions.¹⁷² By way of analogy, it was suggested that the CJEU's reasoning should be extended to impose a special competition law duty to license SEPs to component manufacturers.¹⁷³ An argument was made that: "SEP is as essential to component manufacturers to produce and sell components as it is to end-product manufacturers" and "a FRAND commitment ... gives rise to a legitimate expectation of any party who needs a licence in order to produce and sell standard-compliant products, including, therefore, undertakings producing components".¹⁷⁴ It concludes that: "if a dominant SEP holder cannot enforce its SEP against an infringing undertaking which is a willing licensee

¹⁶⁹ Bowman Heiden and Nicolas Petit, 'Patent "Trespass" and the Royalty Gap – Exploring the Nature and Impact of Patent Holdup' (2018) 34 *Santa Clara High Technology Law Journal* 179.

¹⁷⁰ For patent exhaustion arguments see section 3.2. above.

¹⁷¹ Renato Nazzini, 'Level Discrimination and FRAND Commitments Under EU Competition Law' (2017) 40 *World Competition* 213.

¹⁷² *Huawei v ZTE*, C-170/13, EU:C:2015:477, para.s 48-50.

¹⁷³ Renato Nazzini, 'Level Discrimination and FRAND Commitments Under EU Competition Law' (2017) 40 *World Competition* 213, 231.

¹⁷⁴ *Ibid.*

because of the FRAND commitment that it made, it must follow that the SEP holder has a duty to grant a licence to that undertaking on FRAND terms.”¹⁷⁵

However, the reasoning found in *Huawei v ZTE* in no way provides a legal basis for an additional doctrine leading to a competition law duty to license. *Huawei v ZTE* concerned the general conditions under which SEP holders can seek injunctions against unlicensed implementers, and it says nothing about a duty to license *specifically* to component suppliers. A well-established, and demanding, competition law refusal to license doctrine already exists. It is, of course, right to point out that if the SEP holder decides to sue component manufacturers for infringement, it may not be able to obtain an injunction unless it offers them a FRAND license. But the logic of the argument breaks down because this is also true of the case in which the SEP holder decides to sue end product manufacturers for infringement.

Finally, the argument misreads the legitimate expectations requirement of the FRAND commitment. Component suppliers can only be said to entertain legitimate expectations to obtain FRAND licenses if such an obligation is included in the text of the FRAND commitment itself or in the SSO policy documents underpinning such commitments. However, as seen above, the wording of the FRAND commitment differs among SSOs. Some specifically seek to impose a duty to license at any level of the production chain while others do not.

In conclusion, EU competition law in general, and Article 102 TFEU in particular, do not appear to impose a specific duty to license to component manufacturers when a SEP holder licenses to downstream producers only and does not assert patents against component manufacturers. Of course, the situation may be different if the SEP holder refuses to license all third parties and reserve the manufacture of standard-compliant products to itself, or if it licenses only to some component manufacturers and not to others.¹⁷⁶ However, these scenarios are unconventional in industry practice and, consequently, the potential of EU competition law to impose a duty to license at every level of supply chain remains limited.

4.2 Anti-competitive discrimination (Article 101 d) and 102 c) TFEU)

An alternative legal basis for an unconditional LTA obligation could stem from the prohibition of discrimination found in Article 101(d) and 102(c) TFEU. Under this construct, a FRAND-committed SEP owner would unlawfully discriminate between different levels of a value chain if licenses are not given at all levels. However, in EU competition law, discriminatory conduct is not *unconditionally* unlawful under these provisions. Both provisions require a showing that the discrimination applies to trading parties who compete on a same relevant market and inflicts a disadvantage to one (or more) of them. And Article 102(c) TFEU additionally requires a showing of dominance.

Clearly, in a license to all context, one envisions a discrimination between distinct levels of a value chain who do not compete with each other. More graphically, how can a SEP holder distort competition that does not exist between a component supplier and a handset manufacturer? Or, to take another scenario how, can an SEP holder distort competition between

¹⁷⁵ Ibid.

¹⁷⁶ Nicolas Petit, ‘*Huawei v ZTE*: Judicial Conservatism at the Patent-Antitrust Intersection’, (2015) 2 *CPI Antitrust Chronicle*, 1-8

similarly situated players (i.e. component suppliers) in different industries (automotive and aerospace)?

A possible antitrust policy argument for LTA could be paragraph 285 of the HCG, which states that: “In order to ensure effective access to the standard, the IPR policy would need to require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on fair, reasonable and non-discriminatory terms ”.¹⁷⁷

However, a careful examination of the scope, letter and spirit of HCG immediately calls into question that idea. To start, the HCG cover competitors’ agreements and joint ventures. And while the HCG have a section on standardization agreements of relevance to SSOs – it seeks to promote SSOs’ intellectual property rights policies compliant with Article 101 TFEU – one can see that HCG do not cover vertical licensing transactions between SEP owners and non-competing implementers.¹⁷⁸ Put differently, under the HCG, the target of any obligation – if any – is the SSO, not the SEP holder.

Additionally, the HCG do not prescribe an antitrust obligation. The text’s function is to provide a safe harbour that specifies which competitors’ agreements can be deemed presumptively lawful. Outside of this safe harbour, there is no antitrust presumption of liability. Paragraph 279 is explicit: “The non-fulfilment of any or all of the principles set out in this section will not lead to any presumption of a restriction of competition within Article 101 TFEU. Lastly, any reading of §285 the HCG as a source of an antitrust obligation to LTA would gloss over the fact that the HCG acknowledge the impossibility of an *unconditional* Article 101 TFEU obligation to license to all, when they stress the importance of SSOs IPR policies being “adapted to the particular industry and the needs of the standard-setting organisation in question”.¹⁷⁹

Finally, the term “*all third parties*” envisaged in paragraph 285 of the HCG is not further defined. As seen in Section 3, SEPs include wide claims and often full implementation of a standard’s functionality is provided by the end-device. If that is so, then “all third parties” could be only those that fully implement the standard i.e. end-devices. This question will often be sector specific and depend from industry to industry.

The goal of the HCG is to ensure effective *access* to the standard, which is mentioned throughout the text. For instance, paragraph 283 of the HCG provides that “the standard-setting organisation's rules would need to ensure effective access to the standard on fair, reasonable and non-discriminatory terms”.¹⁸⁰ Then in paragraph 287 the HCG continue to explain that FRAND commitments “are designed to ensure that essential IPR protected technology incorporated in a standard is *accessible* to the users of that standard...”¹⁸¹ Finally, the

¹⁷⁷ Note that a wide consultation process led to the adoption of the HCG, which led to dozens, if not hundreds of stakeholders inputting, in areas far larger than patents, standards etc. The text was subject to intense deliberation and scrutiny. At that time, no one discussed LTA in the HCG consultation – it wasn’t an issue. From a policy perspective, any attempt to reverse engineer this text through a new, distinct, Communication would necessitate to introduce a similar degree of participation.

¹⁷⁸ HCG, para 288. As the Guidelines say, they are about “compliance with Article 101 TFEU of the standard setting organisation”.

¹⁷⁹ Ibid, para 284.

¹⁸⁰ Ibid, para 283.

¹⁸¹ Ibid, para 287.

assessment of whether the SSO IPR policies restrict competition will focus on “access to the standard”.¹⁸² As already explained, access to a standard does not equate with having a direct license. Access to a standard can be provided by other means as well, such as by indirectly benefiting from a license by supplying licensed end-device makers, by having non-assertion agreements, or by the decision of the patent owner not to enforce its patents and not having a licensing program.

4.3 ‘No use no pay’ (Article 101 TFEU)

A final competition law legal basis for an LTA obligation might originate in the case-law on ‘no use no pay’ under Article 101 TFEU. This principle stems from the *Windsurfing* case-law, where the Court initially said that it is unlawful under Article 101 TFEU to charge royalties for implementations, products not covered by a patent.¹⁸³ This may happen when royalty payments are calculated on the basis of end product sales, though this is not necessarily the case. On the basis, the Guidelines on Technology Transfer Agreements have note that there is a restriction by object when “royalties are calculated on the basis of all product sales irrespective of whether the licensed technology is being used”.¹⁸⁴

Yet, however, this case-law seems to be a fragile basis on which to mandate an LTA duty. First, neither *Windsurfing* nor the Technology Transfer Guidelines target as such the use of end-device royalty payments. In *Windsurfing*, the Court did not object to the ability as such to charge royalties on the basis of the end product (here, the sailboard) that reflect the value of the patented component (here, the rig), but only to the risk that such royalties would cover other, non-patented components. The Court actually sided with the Commission which had considered that the use of such a method of calculation could be justified by pragmatic reasons, in particular when “the number of items manufactured or consumed or their value are difficult to establish separately in a complex production process, or ... there is for the patented item on its own no separate demand which the licensee would be prevented from satisfying through such a method of calculation”.¹⁸⁵

Moreover, any proposition that Article 101 TFEU prohibits end-device licensing glosses over the explicit exception introduced in the Technology Transfer Guidelines which provide: “Exceptionally, however, an agreement whereby royalties are calculated on the basis of all product sales may fulfil the conditions of Article 101(3) in an individual case where on the basis of objective factors it can be concluded that the restriction is indispensable for pro-competitive licensing to occur. This may be the case where in the absence of the restraint it would be impossible or unduly difficult to calculate and monitor the royalty payable by the licensee, for instance because the licensor’s technology leaves no visible trace on the final product and practicable alternative monitoring methods are unavailable”.¹⁸⁶

¹⁸² Ibid, para 294.

¹⁸³ See C-109/97 *Windsurfing*, ECLI:EU:C:1999:230, para 65.

¹⁸⁴ See European Commission, ‘Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements’ [2014] OJ C 89 (“Technology Transfer Guidelines”) §101.

¹⁸⁵ See C-109/97 *Windsurfing*, ECLI:EU:C:1999:230, para 65.

¹⁸⁶ Technology Transfer Guidelines, para 102.

A second set of arguments against the idea that the no use no pay case-law can form a legal basis to the license to all regime stems from the case law on post-expiration royalties. In *Ottung*, an implementer had signed an indeterminate licensing contract, and was requested to pay royalties post patent expiry.¹⁸⁷ The implementer had stopped paying the licensing fees, and a dispute occurred with the licensor over whether the clause providing for post expiration royalties was compatible with Article 101 TFEU. The Court held that a freely negotiated clause of this kind does not constitute a restriction of competition by object.¹⁸⁸ It however held that if the agreement does not provide for a termination possibility with appropriate notice or seeks to restrict the licensee's freedom post termination, then it may constitute a restriction by effect, in which case its "economic and legal context" must be taken into account.¹⁸⁹ Even though the rationale for this is unclear, the idea seems to be here that it is inappropriate to pay a royalty while there can no longer be any transfer of technology.

In *Genentech*, the Court considered the legality of a technology transfer agreement that required payment of royalties for the use of rights attached to patents, notwithstanding "the revocation or non-infringement of patents protecting that technology".¹⁹⁰ Confirming, furthering and explicating its *Ottung*, the Court held that as long as a licensee is "able freely to terminate [a licensing] agreement by giving reasonable notice", there is no violation of Article 101(1) TFEU.¹⁹¹ The Court indeed seems of the view that if "the licence may be freely terminated by the licensee", there is no harm to competition that restricts the "freedom of action of the licensee" or causes foreclosure effects.¹⁹² And it seems to carry *Ottung* further in that it does not even contemplate the possibility of a restriction by effect.

This case-law suggests that competition law does not oppose to royalty payments in the absence of acts of use, infringement or patent validity. Pragmatist, the Court recalled the *Ottung* statement whereby royalty payment clauses may be structured such that they extend beyond the validity of IP rights for essentially commercial reasons.¹⁹³

5 International Perspective: US Law

Having considered whether EU law requires SEP owners to license to all, this section will briefly set out the approach in the US. Two streams of cases are relevant to the ATA - LTA discussion. First, some courts in the US have relied on patent damages law to require that patent owners in multi-component products cases base their royalty demands on the value of the smallest saleable patent practicing unit. Second, one US court recently applied US antitrust law to force a SEP holder to grant licences to chip manufacturers. The US experience is often

¹⁸⁷ See C-320/87 *Ottung*, ECLI:EU:C:1989:195.

¹⁸⁸ *Ibid*, para 15.

¹⁸⁹ *Ibid*, para 13.

¹⁹⁰ C-567/14 *Genentech*, ECLI:EU:C:2016:526, para 35.

¹⁹¹ *Ibid*, para 45.

¹⁹² *Ibid*, para 40.

¹⁹³ *Ibid*, para 39: "the obligation to pay a royalty, even after the expiry of the period of validity of the licensed patent, may reflect a commercial assessment of the value to be attributed to the possibilities of exploitation granted by the licence agreement, especially when that obligation to pay was embodied in a licence agreement entered into before the patent was granted"

pointed out as an evidence of the requirement to apply the LTA approach. We will we briefly discuss US patent damages law and antitrust law in turn.

5.1 Patent damages law

In US law, patent damages are calculated either as lost profits or, if they cannot be proven, as a reasonable royalty.¹⁹⁴ A long-standing rule in the case of multi-component products is that patent damages should be *apportioned* to the value of the patented technology. The rule of apportionment is supposed to prevent the patentee from being overcompensated by receiving damages that go beyond the value of the patented technology.¹⁹⁵ The apportionment in reasonable royalty cases is generally done by the proper combination of a royalty base and a royalty rate which should reflect the value attributable to the patented feature in multi-component products. From an economic perspective, adjusting the royalty rate and the royalty base can lead to identical results. For example, a royalty rate of 1% applied to a royalty base of \$10 is the same as the royalty rate of 10% applied to a royalty base of \$1. Both result in total royalties of \$10. The point of apportionment in reasonable royalty cases is that the ultimate combination of royalty rate and royalty base should reflect the value of the patented technology and no more.¹⁹⁶

Against this background, the term “smallest saleable patent-practicing unit” was first introduced in 2009 by Judge Rader in *Cornell University v. Hewlett-Packard*.¹⁹⁷ The case concerned one patent that read on one component that was a part of a larger multi-component product. The patent at issue read on an instruction reorder buffer (IRB), which is a part of the computer processor, which itself is a part of a CPU module, which is a part of a “CPU brick”, and which is ultimately a part of a larger computer server. Cornell’s expert first calculated damages based on revenues from sales of servers and workstations (final downstream products) which Judge Rader excluded because it would “mislead the jury to award damages far in excess of their compensatory purpose.”¹⁹⁸ Cornell’s expert then came back with a revised damages testimony what that was based on a CPU brick – one component down the ladder from the servers and workstations. Judge Rader was not impressed, and excluded Cornell’s revised expert testimony. He held that CPU bricks contained numerous non-patented components in addition to the infringing processors and that Cornell’s revised royalty base was still “beyond the scope of the claimed invention”.¹⁹⁹ He criticised Cornell for not providing any evidence

¹⁹⁴ The US Patents Act, 35 U.S.C. § 284 (“the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer”).

¹⁹⁵ See *Garretson v. Clark* (1884) 111 U.S. 120; also Anne Layne-Farrar, ‘The Patent Damages Gap: An Economist’s Review of U.S. Patent Damages Apportionment Rules’ (2017) SSRN <<https://ssrn.com/abstract=2911289>>.

¹⁹⁶ See: *Ericsson v. D-Link*, 773 F.3d 1201, 1226 (Fed. Cir. 2014); also *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1338-1339 (Fed. Cir. 2009) (“the base used in a running royalty calculation can always be the value of the entire commercial embodiment, as long as the magnitude of the rate is within an acceptable range (as determined by the evidence). Thus, even when the patented invention is a small component of a much larger commercial product, awarding a reasonable royalty based on either sale price or a number of units sold can be economically justified.”).

¹⁹⁷ See *Cornell University v. Hewlett-Packard Co.*, 609 F.Supp.2d 279 (N.D. New York 2009).

¹⁹⁸ *Ibid*, 284.

¹⁹⁹ *Ibid*, 285.

that its patented feature drove demand for CPU bricks, and for the fact that CPU bricks are not sold separately on the market. Judge Rader then held that “the logical and readily available alternative [for royalty base] was the smallest salable infringing unit with close relation to the claimed invention—namely the processor itself.”²⁰⁰

The US Federal Circuit has subsequently endorsed the SSPPU. In *Laser Dynamics v Quanta* it held that if small elements of multi-component products are accused of infringement, royalties should generally be based on the “smallest salable patent-practicing unit.”²⁰¹ In *VirnetX v Cisco* from 2014,²⁰² the Federal Circuit further expanded the SSPPU notion by holding that if the SSPPU itself is a multi-component product, further apportionment is required below the SSPPU.

However, in two SEP cases, *Ericsson v D-Link* and *CSIRO v Cisco*, both concerning SEPs for Wi-Fi standards, the Federal Circuit clarified that it does not require that all damages start with SSPPU; that the evidence of real world licensing agreements have precedence and; that the SSPPU applies only in jury trials in order not to mislead the juries in awarding excessively high damages. In *CSIRO v Cisco*, the Federal Circuit held that “the rule ... which would require all damages models to begin with the smallest salable patent-practicing unit—is untenable”²⁰³ It held that the SSPPU doctrine has two parts – a substantive legal rule and an evidentiary principle. A substantive legal rule is the requirement of apportionment, namely that “the ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more,”²⁰⁴ and that the apportionment could be done in various ways “by careful selection of the royalty base to reflect the value added by the patented feature, where that differentiation is possible; by adjustment of the royalty rate so as to discount the value of a product’s non-patented features; or by a combination thereof.”²⁰⁵ On the other hand, the evidentiary principle behind the SSPPU is the fear of jury bias. According to the Federal Circuit: “It is not that an appropriately apportioned royalty award could never be fashioned by starting with the entire market value of a multi-component product—by, for instance, dramatically reducing the royalty rate to be applied in those cases—it is that reliance on the entire market value might mislead the jury, who may be less equipped to understand the extent to which the royalty rate would need to do the work in such instance.”²⁰⁶ Therefore, it seems that there is no legal requirement which would compel the parties to use the SSPPU as the royalty base. The exact FRAND royalty base would depend on the negotiation between the parties.

More recently, district court in *HTC v Ericsson* rejected the argument that FRAND royalties *must* be calculated on the SSPPU.²⁰⁷ Specifically, the court found that the SSPPU arguments are unpersuasive because i) the profit margin, or even the cost, of the baseband

²⁰⁰ Ibid, 288.

²⁰¹ Ibid, 67 (“Where small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product. Thus, it is generally required that royalties be based not on the entire product, but instead on the “smallest salable patent-practicing unit”).

²⁰² *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308 (Fed. Cir. 2014).

²⁰³ *CSIRO v Cisco*, 809 F.3d 1295, 1303 (Fed. Cir. 2015).

²⁰⁴ *Ericsson v D-Link*, 773 F.3d 1201, 1226 (Fed Cir 2014).

²⁰⁵ Ibid, 1226.

²⁰⁶ Ibid, 1226-1227.

²⁰⁷ *HTC v Ericsson* no. 6:18-CV-00243-JRG (E.D. Tex. 23 May 2019).

processor is not reflective of the value of SEPs; ii) SEPs are not limited in claims only to a baseband processor and the baseband processor is thus not the proper SSPPU, and iii) the market evidence showed that industry is licensing on the end-device level and there was no evidence on licenses concluded based on the SSPPU.²⁰⁸

Therefore, SSPPU is not a universal principle applicable to all patent damages cases.²⁰⁹ It applies only in jury trials and only if there is no market-based evidence of parties using a larger royalty base. Importantly, the SSPPU doctrine relates to the choice of the *royalty base* and says nothing about who in the supply chain should take the license.²¹⁰ Indeed, all cases described above concerned a dispute between the patent owner and final downstream product manufacturers. It was not disputed whether they should be the one taking the license, but it was contested whether the royalties should be based the price of downstream products or the SSPPU. Consequently, the SSPPU doctrine cannot be automatically interpreted as supporting license to all approach, nor as requiring that all damages should be calculated based on components.

5.2 US Antitrust Law

In *FTC v Qualcomm*, the Northern District Court of California recently upheld an FTC complaint whereby Qualcomm's licensing practices towards competing chip manufacturers allegedly constituted cognizable violations of Section 2 of the Sherman Act.²¹¹ One of the contested practices was Qualcomm's policy of licensing SEPs only to final downstream manufacturers and refusing to license SEPs to competing chip manufacturers.²¹² According to the FTC, "Qualcomm's refusal to license competing manufacturers of [modem chips], in contravention of its FRAND commitments, contributes to [Qualcomm's] ability to tax its competitors' [modem chip] sales, and thus maintain Qualcomm's modem chip monopoly."²¹³

In 2019 the judge ruled that Qualcomm indeed has an antitrust duty to license to all.²¹⁴ The judge relied on the 1985 Supreme Court opinion *Aspen Skiing*, where it read a test which prohibits refusal to deal with competitors when three requirements are met: i) unilateral termination of a voluntary and profitable course of dealing; ii) refusal to deal even if compensated at retail price, which suggested that the conduct was anticompetitive; iii) refusal to provide its competitor a product that was already sold in a retail market to other customers.²¹⁵ In this case, the district court judge considered that all three criteria had been fulfilled as

²⁰⁸ Ibid, p. 11.

²⁰⁹ Richard Stark, 'Debunking the Smallest Salable Unit Theory' (2015) *CPI Antitrust Chronicle*; David Kappos, Paul Michel, 'The Smallest Salable Patent-Practicing Unit: Observations on Its Origins, Development and Future' (2018) 32 *Berkeley Technology Law Journal* 1433.

²¹⁰ However it is not uncommon in practice to agree on fixed per-unit royalty or to provide a cap that over a certain amount the licensee will not pay more royalties. In these situations a royalty base is less relevant.

²¹¹ *FTC v Qualcomm*, Case 5:17-cv-00220-LHK (N.D. Cal. 2019).

²¹² Other allegedly anti-competitive practices included "no licence to chip", whereby Qualcomm sold its chips only to downstream product manufacturers under the conditions that they also take a license for Qualcomm's SEPs, and entering exclusive dealing arrangement with Apple.

²¹³ Ibid, p. 13.

²¹⁴ *FTC v Qualcomm*, Case 5:17-cv-00220-LHK (N.D. Cal. 2019).

²¹⁵ Ibid, p. 137.

Qualcomm historically used to license component manufacturers, which it terminated in order to extract unreasonably high royalties from end-device manufacturers.²¹⁶

The case, however, is criticised by some for misapplying *Aspen Skiing*, for relying too much on past historical information that may not be adequate for changed industry environment and for disregarding incentives to innovate in the future.²¹⁷ And there is, indeed, ground to discuss the District Court's interpretation of *Aspen Skiing*.²¹⁸ To start, subsequent opinions have considerably reduced *Aspen Skiing*'s relevance as a source of doctrinal authority for the imposition of an antitrust duty to deal. In *Trinko*, the Supreme Court held that "*Aspen Skiing* is at or near the outer boundary of Section 2 liability".²¹⁹ Though *Trinko* did not read out the possibility for courts and agencies to affirm an antitrust duty to deal, it narrowed it down to a "limited exception" to the right of firms to decide to deal (or not) with rivals.

In addition, in *Aspen Skiing*, the defendant's conduct seemed to have no other demonstrable reason than exclusion. The *Trinko* court stressed that the defendant in *Aspen Skiing* has consented to short term profit sacrifices, by refusing to cooperate even if compensated at its own retail price. By contrast, while the facts in *FTC v Qualcomm* might suggest "dreams of monopoly profits" on the part of Qualcomm, there were also other plausible motivations than anticompetitive exclusion to its refusal to license, and in particular a rational profit maximizing preference to generate licensing revenue from wealthier device makers than from rival chipset makers. And even if these alternative explanations are unconvincing, what matters is that an inference of anticompetitive "predatory" intent from Qualcomm is not as obvious as it was in *Aspen Skiing*.²²⁰

Last, and perhaps more importantly, the court in *FTC v Qualcomm* has not fully applied the legal test set out in *Aspen Skiing*. The *Aspen Skiing* court insisted on the necessity to go beyond an assessment of the impugned conduct's effects on competitors, and "consider its impact on consumers and whether it has impaired competition in an unnecessarily restrictive way".²²¹ Having established alleged exclusionary behaviour, the District Court in *FTC v Qualcomm* did not move on to assess whether consumers were "adversely affected" by Qualcomm's refusal to license OEMs. The case is currently under appeal and it remains to be seen what will be the final US word in this regard.

Moreover, whatever the final decision, the legal significance of *FTC v Qualcomm* case for other SEP cases is uncertain. The facts in the case were quite unique, owing to Qualcomm's position as a SEP owner *and* chip manufacturer. Thus, the case concerned a refusal to license *competitors* (who here happened to be component manufacturers). On the other hand, many SEP owners are either only active on the licensing market (i.e. non-practicing entities), or are active at levels of the value chain distinct from implementers seeking a licence (for instance,

²¹⁶ *FTC v Qualcomm*, Case 5:17-cv-00220-LHK (N.D. Cal. 2019) p. 137-141.

²¹⁷ See: Lindsey Edwards, Douglas Ginsburg, Joshua Wright, 'Section 2 Mangled: FTC v Qualcomm on the Duty to Deal, Price Squeezes and Exclusive Dealing' (2019) *George Mason University Law & Economics Research Paper Series* 19-21; The US Department of Justice even intervened on Qualcomm's side, see US Department of Justice, Antitrust Division, United States' Statement of Interest Concerning Qualcomm's Motion for Partial Stay of Injunction Pending Appeal (16 July 2019).

²¹⁸ *Aspen Skiing v. Aspen Highlands Skiing*, 472 U.S. 585 (1985)

²¹⁹ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. __ (2003).

²²⁰ *Aspen Skiing v. Aspen Highlands Skiing*, , 472 U.S. 585 (1985).

²²¹ *Id.*

the SEP owner may supply final downstream products or network infrastructure). In such cases, they would not be deemed competitors, and the *Aspen Skiing* case-law is presumably inapplicable.

Finally, it is interesting to compare whether the facts that gave rise to *FTC v Qualcomm* case would be prohibited under EU competition law. As seen, legal tests for anti-competitive refusal to deal differ markedly in the US and in the EU. In the EU, we have explained how not licensing at a component level does not prevent component manufacturers from supplying licensed end-device makers. Licensing only occurs at a different level of the production chain. Therefore, EU competition law would unlikely apply to the facts of *FTC v Qualcomm*.

6 The Application of FRAND Licensing Levels in the EU context

As seen, neither general principles of EU law nor patent, contract and competition laws require LTA approach from SEP owners. The only exception may be in cases where SSO's IPR Policy explicitly obliges SEP owners to make licences available at any level of the supply chain. The legal flexibility afforded by the EU law grants parties the freedom to efficiently tailor their licensing in accordance with their needs and industry specifics.

What the EU law does require, however, is effective *access* to the standard. We have seen that contractual FRAND commitment and competition law prevent SEP owners from reserving the use of SEPs only for themselves and excluding all others from using the standard. What they require is effective access to users of the standards.²²² As mentioned, having a direct licence from the SEP owner is only one way of ensuring access to the standard. Other equal methods are indirectly benefiting from a license by selling products to licensed downstream manufacturers, by concluding non-assertion agreements, or by not having any license at all if the patent owner has a policy of not monetising its patents and thus not having a licensing program.

In a practical sense, the application of FRAND level licensing under EU law can be explained in a few steps. The first step in any FRAND negotiations would be to consult the precise text of the FRAND commitment and the IPR Policy of the relevant SSO. Simply put, if the text of the FRAND commitment and the IPR Policy explicitly require SEP owners to license at all levels of the production chain and the relevant governing law enables this, then all implementers including the component manufacturers may be able to demand licenses to SEPs they are infringing. They would have contractual claim against the SEP owner. However, as we have shown, SSOs rarely include LTA obligation. To date, this seems to be adopted only by one SSOs – IEEE.

We have analysed the FRAND commitment given at ETSI, one of the most influential SSO with respect to technological standards, and demonstrated that it does not include an obligation to license to all points in the production chain but applies only to fully compliant end-devices. Other SSOs have similar wording that require licensing to all “applicants” that fully implement the standard, which is often end-product device. This is understandable given the fact that SEPs include wide claims which are usually fully implemented at the end-device.

²²² See Mathew Heim, Igor Nikolic, ‘A FRAND Regime for Dominant Digital Platforms’ (2019) 10 *JIPITEC* 38 (analysing how FRAND regime has enabled efficient access across various industries and sectors).

In such SSOs, standard users would not have a positive contractual claim to force the SEP owner to conclude licensing agreement. It is up to the SEP owner to decide how to provide effective access to the standard. As mentioned, SEP owner may decide not to license its SEPs and not have a licensing program. It would be paradoxical to force such SEP owners to monetise their patents against their will.

In the next step, if SEP owners decide to monetise their patents, they should adopt a licensing strategy and chose the level of the production chain to license. As we have seen, SEPs often have broad claims that frequently read on combination of components, downstream devices or full networks. This means that typically one component (i.e. a chip) would not implement all SEPs. The most appropriate point to license the whole SEP portfolio would then be at the end-device level. It is important to choose only one point in the production chain for licensing because of the effects of patent exhaustion doctrine, which prevents licensing patents twice at different levels in the production chain – though of course not distinct patents at different levels. If the SEP owner licenses only to downstream manufacturers its SEPs cannot be used against component manufacturers who are protected by “have made” rights. In other words, component manufacturers would be indirectly licensed by selling to licensed downstream end-product manufacturers. Effective access to the standard is thus ensured. The EU competition law would then also hardly be applicable as component manufacturers are not prevented from using the standard.

Therefore, we have established that the EU law requires SEP owners to provide effective access to the standards (i.e. ATA). The way to implement it depends on the commercial decision of the SEP owner. However, SEP owners are not unconstrained – if they do decide to monetise their patents against companies at one level of the supply chain, they need to offer licences that are on FRAND terms. Failure to do so would be a breach of contractual FRAND commitment. And preventing effective access to the standard would be caught by competition law as well.

We also caution against attempts to argue for blanket imposition of LTA requirement, because there is no basis in European law that we can find that supports an LTA obligation – quite the opposite. And forcing the imposition of LTA may have unintended consequences. In practice, mandating license to all approach could lead to two conflicting outcomes: i) splitting the portfolio of those SEPs that read only on components (which will be licensed to component manufacturers) and the rest of SEPs that have wider claims that will continue to be licensed to end-devices and/or some other intermediary supplier, or ii) shifting the total royalty burden up the supply chain and conduct licensing of all SEPs on a component level. Both outcomes could be difficult to implement and might lead to potentially adverse consequences.

Portfolio splitting would by far be the worst option. Instead of simplifying and easing licensing, it would result in enormous complexities and increase transaction costs. SEP owners would have to search and identify in their portfolios only those SEPs that read only on components and negotiate and conclude licenses with component manufacturers. In addition, the rest of the SEP portfolio would continue to be negotiated and licensed with end-device manufactures. This would be unattractive to all participants in standardisation.

On the other hand, pushing the royalty burden up the supply chain and licensing the whole SEP portfolio with component manufacturers is also not without problems. It requires recognising that current prices of unlicensed components (i.e. chips) are not an adequate proxy

for the value of intellectual property. There is no reason to associate the physical costs of producing the chips with the value it brings to end-products. Even if we accept that component manufacturers should bear the full burden of licensing costs,²²³ this leads to additional difficulties. It would necessitate the increase of price of components and those manufacturers that first accept licences would be at a significant cost disadvantage against their unlicensed competitors. It would incentivise holdout, delaying or refusing taking a license as unlicensed components would be much cheaper than licensed competitors. It also opens the question how component manufacturers would adequately know the value of the patent to end product. Moreover, SEP owners would also be prevented from mutually beneficial cross-licensing, as component manufacturers typically do not hold relevant SEPs. Thus, it is unclear what benefits the LTA approach would have over established industry practice.

7 Conclusion

This article suggests that there is no legal basis from imposing a wide LTA obligation on SEP holders. Quite to the contrary, the existing legal framework allows for flexible and tailored solution that accommodate heterogeneous interests and different industries. Proponents of LTA complain that current licensing models for FRAND committed SEPs are indeterminate. They argue that LTA obligations across the board would resolve legal uncertainty and improve economic efficiency. However, in most walks of life, market-based competition delivers efficient outcomes. Competition amongst SEP licensing models may be no exception. As long as effective institutions, frameworks and procedures are in place, one may expect good outcomes from licensing negotiations amongst technology developers and implementers. So far, the empirical economic track record from 2G, 3G, and 4G suggests that such institutions have delivered successful results.

A way forward might thus not be the imposition of far-reaching legal obligations devoid of text or case-law basis, but an appreciation of the realities of patent licensing and of market solutions adapted to the empirical specificities of each industry.

²²³ See Thomas Kuhnen, 'FRAND Licensing and Implementation Chains' (2019) *Journal of Intellectual Property Law & Practice* forthcoming (Presiding Judge at the Higher Regional Court of Dusseldorf arguing that every interested party in the supply chain has a claim to a license, endorsing LTA approach, but that the amount of FRAND royalty does not depends on the position of the party in the supply chain. FRAND royalty should be based on the value it brings to end-devices, and it is immaterial who will pay the licensing costs in the supply chain).