

A short review on SEPs and FRAND Licenses

In telecommunications, standards are imperative for enabling the exchange of data between parties. Standards Setting Organizations or SSO oversee and coordinate technological progress as it happens, in particular in telecommunications and thus define *telecommunication standards*, for example 3G or 4G technology. Standard Essential Patents or SEPs are patents that their owner has declared as *essential* to a standard.

FRAND – Fair, Reasonable, And Non-Discriminatory. This acronym is used by the SSO to indicate the requirements that any license presented to an implementer of the technology defined in a Standard Essential Patent should meet. There is however no specific meaning of each of the terms “fair”, “reasonable” and “non-discriminatory” but they are currently being specified by growing caselaw. Every decision in this matter is thus much anticipated.

An introduction

When the so-called smartphone patent wars started in early 2010s¹, requests for injunctions or allocation of damages were the main issues. In more recent years, the attention turned to the question of alleged abuse of a dominant position by SEP owners versus an unwillingness to take a license by SEP implementers. Only recently has the focus moved to the very evaluation of FRAND terms.

In the future it is anticipated that new technologies, such as the upcoming 5G standard and the Internet of Things, IoT, will be using SEPs and this convergence from a variety of backgrounds will bring together numerous new players, both implementers and owners of IP rights, from various industry fields. The economic stakes are high, as for example the IoT will concern much more connected devices than just mobile phones². Therefore, a clear legal framework in Europe and elsewhere regarding SEP licensing would be welcome^{3,4}.

It is evident that a clear understanding of SEPs and how they affect the deployment of new technologies will be key. In order to assist this understanding, in the following four short articles we present an overview highlighting what we believe are the key concepts:

- *Standard Essential Patent and dominant position;*
- *Who is the licensee;*

¹ “Smartphone Wars: A Phantom Menace”, Richard Vary, Competition Policy International, CPI Antitrust Chronicle, Vol. 2, November 2017

² “Brevets essentiels : FRANDez-vous en terre inconnue”; P. Debre and S. Cornineau-Picci; Propriété Industrielle; No. 4; Avril 2018 ; English translation : https://lpscdn.linklaters.com/-/media/files/linklaters/pdf/mkt/paris/frandomness_of_essential_patents.ashx?rev=c4bfee4c-77ff-4802-abb5-e3ccb47b927&la=en&hash=6F0054F461A11BADD85D7FA61115B629C0027FBE

³ Fair Standards Alliance, www.fair-standards.org

⁴ “Setting out the EU Approach to Standards Essential Patent”, EU Commission, <https://ec.europa.eu/docsroom/documents/26583>

- *Evaluation of royalty fees (1);*
- *Evaluation of royalty fees (2).*



Standard Essential Patent and dominant position

Dominant position versus abuse of dominant position

A SEP Patent owner necessarily has a **dominant position**: manufacturers who are implementing a Standard inevitably fall under the scope of any patent essential to that Standard. For example, it is established that Motorola currently has a dominant position regarding the GPRS standard; Samsung has a dominant position regarding UMTS (3G) standard.

However, just because a company has a SEP does **not** equate with the company having a dominant position with respect to a specific case.

For example, in France Brevets vs HTC⁵ before the Dusseldorf Court, Germany, NFC technology owner France Brevets was found **not** having a dominant position as this technology was not essential to the activity of mobile phones manufacturer HTC. It would have been different if the alleged infringer was producer of NFC chips, as in this case, the technology would have been essential to the product and the patent owner may have been found having a dominant position.

As another example, during the Huawei vs ZTE case⁶, the Advocate General indicated in his Opinion that a dominant position should be a rebuttable **presumption** that may be overturned with “specific, detailed evidence”.



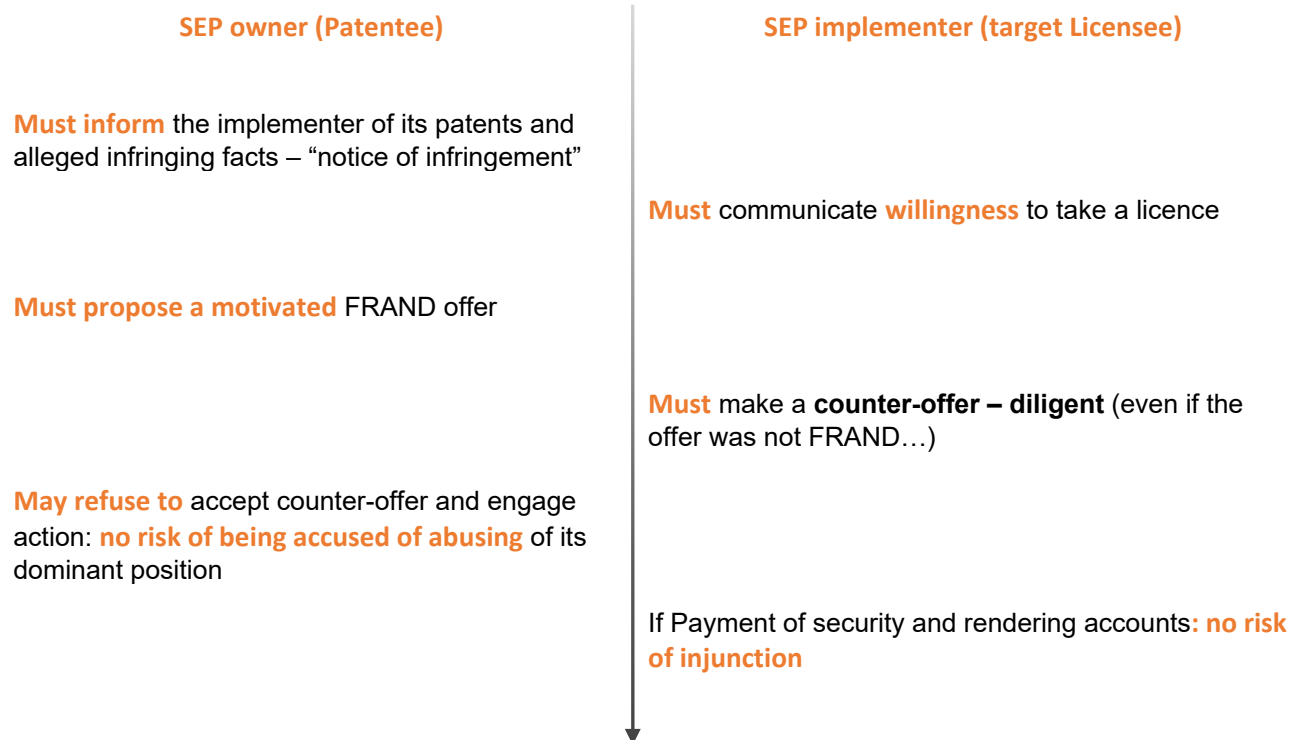
Hence, having a dominant position per se is not an issue. However, any abuse of a dominant position shall be prohibited by Art. 102 of Treaty of the Functioning of the EU. For example, requesting unfair injunction or non-reasonable royalties by a party having a dominant position may be seen as abusive.

⁵ France Brevets vs HTC (26-03-2015), Düsseldorf Landgericht

⁶ Huawei Technologies v ZTE and ZTE Deutschland (16-07-2015), Case C-170/13, CJEU

Some conclusions from the Court of Justice of the European Union regarding FRAND licenses

The Court of Justice of the European Union, CJEU, ruled in Huawei vs ZTE that **negotiations** of FRAND license should be made before initiating proceedings towards injunction and issued some rules that the negotiations should follow. Only if no agreement is reached can the parties rely on the national courts to rule and decide on injunction. The recommendations of the CJEU are summarised in the scheme below. The timeline illustrates the recommended steps and obligations for the SEP owner and SEP implementer.



Despite this undisputable progress, some questions remain that will be discussed in more detail below:

- How to judge if an offer/counter-offer is FRAND?*
- How to appreciate the meaning of “diligent”?*
- How to calculate the royalty fee?*
- Who should take a license?*

Examples of recent caselaw

In Europe

In *Sisvel vs Haier*⁷, it was found that the first notification of infringement from the SEP owner does not need to include claim charts. FRAND was judged by comparison with other granted licenses to same patents, also called “precedent”.

In *Archos vs Philips*⁸, the manufacturer did not show his will to negotiate a license, so the request for abuse of dominant position was rejected.

In *NTT DoCoMo vs HTC*⁹, a delay of 18 months was judged too long for the diligent counter-offer.

In *Unwired Planet vs Huawei*¹⁰, the UK Patents Court moved away from the CJEU scheme.

As a reminder, the main conclusions were as follows:

- Huawei infringed valid patents;
- Huawei was not willing to take a FRAND license;
- Unwired Planet was in dominant position, but did not abuse of it;
- A global FRAND injunction was granted against Huawei.

In this case, in short, the UK approach is more flexible with the appreciations of whether the various steps have been completed. For example, the UK Patents Court found that it is sufficient that the alleged infringer shows that they are willing to take FRAND license, it is not necessary that the counter-offer is really FRAND. Finally, determination of FRAND fee is to be decided by the judge.

The parties appealed the decision and all findings of the first instance decision were upheld in the Court of Appeal's decision¹¹. In particular, a critical question related to the geographical extension of the license and the global nature of the FRAND license was maintained. Hence when a FRAND license is set by a Court, the scope of the FRAND licence must be global. It was also ruled that a FRAND fee should not be seen as a single value, but as a range.

In Asia

In India, in *Ericsson vs Lava*¹², Lava did not make any counter-offer and was delaying the course of the proceedings, therefore an injunction order preventing Lava from importing, exporting, manufacturing, and selling any mobile phones that use Ericsson's patents was granted to Ericsson.

In China, in *Huawei vs Samsung*¹³, the Court ruled in favour of Huawei and issued an order finding that Samsung infringed Huawei's patents. The Court found that Huawei's behaviour fulfilled its FRAND obligations, whereas Samsung's behaviour had not complied with the FRAND principles, as Samsung was found unwilling to take a FRAND License from Huawei. As a consequence, injunctions were ordered in favour of the SEP holder Huawei. The Court ordered Samsung to cease its infringing activities - making or selling its 4G LTE smartphones in China.

In US

In April 2018¹⁴, on a request of Samsung against an alleged abuse of dominant position from Huawei, a Californian Court ordered an anti-suit injunction, ordering Huawei not to enforce the injunctions issued by the Shenzhen court against Samsung until the US court has ruled. An anti-suit injunction refers to an extraordinary procedure where a domestic court issues an order to stop the outcome of proceedings in another jurisdiction.

⁷ *Sisvel vs Haier* (15-03-2017): Case 66/15 OLG Dusseldorf

⁸ *Archos vs Philips* (10-02-2017): District Court of The Hague, citation number: ECLI:NL:RBDHA:2017:1025

⁹ *NTT DoCoMo vs HTC* (29-01-2016): Case 7 O 66/15, Mannheim Landesgericht,

¹⁰ *Unwired Planet vs Huawei* (05-04-2017): EWHC 711, England and Wales High Court
<https://www.bailii.org/ew/cases/EWHC/Patents/2017/711.html>

¹¹ *Unwired Planet vs Huawei* (23-10-2018): Case EWCA Civ 2344, England and Wales Court of Appeal
<https://www.bailii.org/ew/cases/EWCA/Civ/2018/2344.html>

¹² *Ericsson vs Lava* (10-06-2016): CS(OS) 764/2015, High Court of Delhi

¹³ *Huawei vs. Samsung* (04-01-2018): Shenzhen Intermediate People's Court

¹⁴ *Huawei vs Samsung* (13-04-2018): No. 3:2016cv02787 - Document 280 (N.D. Cal. 2018)

Recent developments in Europe

In the Communication from the European Commission entitled “**Setting out the EU Approach to Standards Essential Patents**”¹⁵, concertation between parties is promoted. The Commission also asks for more information and transparency on SEP and which standards they relate.

It is acknowledged that the difficult access to general information on SEP is a practical problem for all. It would be useful to have a list of SEPs that are agreed to be involved in a standard. Independent bodies could certify that a patent is effectively a SEP. Today, only a minor part of so-called essential patents would actually be SEPs. This however has a price estimated to 100 to 10000 \$ per patent. The question is who would bear that cost.

Although more transparency on FRAND fees is welcome, this contradicts with alternative conflict resolutions that often remain confidential. Protecting confidentiality is a challenge in litigation. It is difficult to reconcile the need for necessary information for the Court and a legitimate request for confidentiality of business data.

¹⁵ Communication from the Commission to the Institutions on Setting out the EU approach to Standard Essential Patents (29-11-2017) <https://ec.europa.eu/docsroom/documents/26583>



Who is the licensee?

With a growing number of potential disputes between patentees and implementers, in particular in the light of the rise of IoT using telecom technologies and 5G, an essential question arises: who the license should be directed to? Or in other words: Who should take a license along the value chain?

As a preliminary point, it is important to remind of the principle of **exhaustion of patent rights**. Downstream of the licensee in the value chain, a prior exhaustion of rights prevents a patent owner from suing the buyer of an intermediary product that is subject of a licence.

Let's consider an example of a value chain related to a connected washing-machine.

- Example "Samsung QuickDrive": Laundry planner with Samsung connect app.
<http://www.samsung.com/ie/laundry/>

A SEP owner may assert their rights against any producer of systems or devices reproducing the patent claims. For example, a 3G chip following the 3G standard must implement the method of the SEP patent and hence infringing the SEP owner's right. As will any other devices using 3G standards, such a for example a washing-machine that connects to a network using 3G technology. The SEP owner can thus decide, at least in theory, whether they prefer to assert their patent against the intermediate product manufacturer, i.e. the 3G chip manufacturer, or the final product manufacturer, i.e. the washing-machine manufacturer.



For SEP owners

SEP owners now more and more offer licence to the final product makers as this has certain advantages. It is useful for them to identify the final products where their patents are implemented. It also allows a fairer price for the patentee as this approach takes into account the added value of their technology on the product.

- A connected washing-machine incorporating a 3G chip would be more expensive than a conventional washing-machine thanks to the additional functionality provided by the chip. The chip hence provides an essential added-value to the washing-machine and may even be considered by customer as a trigger for selecting the connected washing-machine from the multitude of washing-machines available on the market. The value added by the chip is therefore much more than the mere value of the chip itself.

- The owner of SEP in 3G chips may therefore consider the washing-machine maker as a licensee rather than the microchip maker. Moreover, a royalty payment based on retail or net price of the washing-machine would be much higher than that of the 3G chip.

For SEP implementers

On the other hand, implementers of SEPS usually prefer that licences be offered to all producers, including intermediary product maker. Under that rationale, FRAND implies that a licence should be granted for any implementer asking for it. Advantages of this approach include that it allows a more accurate determination of the royalty fees that is based on the component that effectively implements the patent. However, the intermediary products are generally cheap with respect to the technology inside it, and hence this choice of licence may result in lower overall fees for the SEP owner.

- In the example, the licence should go to the manufacturer of the 3G microchip rather than to the washing-machine maker. The microchip brings a high value to the final product in comparison to the cheap piece it is made of and its resulting low selling price.

Resulting legal issues

Consider the case of the SEP owner refusing, despite their FRAND commitment, to offer a license to the producer of an intermediary product that is reproducing the SEP features.

The producer of intermediary product is de facto infringing the SEP. Consequently, the final product maker is an infringer too, as implementer of an infringing intermediary element in the final product.

As the final product maker and his suppliers are engaged in a commercial relationship, the final product maker may be allowed to recover "indemnity claims" from the producer of an intermediary product, depending on the contract between the two.

If the SEP owner sues the final product maker, the awkward situation may hence arise where the final product maker could turn to the intermediary product maker that could not obtain the licence, as the SEP owner refused to do so, and that based on a typically higher royalty fee as the royalty fees were based on the final product!

Current positions in the US

Propositions, for example by the IEEE¹⁶ in 2015, have been made that describe a "**licence for all**" or "**access to all**" licence practice. A SEP owner should take the Smallest Saleable Patent Practising Unit, SSPPU, into account when evaluating FRAND fees. Any product maker should have a right to obtain a licence. This proposal was however, not surprisingly, not welcome by SEP owners. Following numerous appeals, it was concluded that the SEP owners have no obligation to grant a licence to intermediate producers and the decision should be made on a case-by-case basis. Meanwhile, a "license to any/all" is promoted by the 4ip Council in Europe¹⁷.

Patent hold-up was a main battle against SEP owners claiming huge fees for including their technology in a standard. Now, **patent hold-out**, that is implementers of SEP technology ignoring patents or having secured a licence with too small fees with respect to the technology they implement in their products, **is also an issue**¹⁸. The US Department of Justice now seeks to achieve a better balance between these two extremes¹⁹.

¹⁶ <https://standards.ieee.org/about/policies/bylaws/sect6-7.html>

¹⁷ "Efficiencies of Access to All v License to All" <https://www.4ipcouncil.com/publications>

¹⁸ "Holding Up and Holding Out", Colleen V. Chien, 21 MICH. TELECOMM. & TECH. L. REV. 1 (2014), <https://repository.law.umich.edu/mttlr/vol21/iss1/1/>

¹⁹ Assistant Attorney General Makan Delrahim Delivers Remarks at the USC Gould School of Law's Center for Transnational Law and Business Conference (10-11-2017), <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center>



Evaluation of royalty fees

Methods

Royalty fees are in general difficult to assess due to FRAND obligations. Two main methods exist:

1. The re-enactment of “Free negotiation” or bottom-up approach
2. The top-down approach

Re-enactment of “Free negotiation” or bottom-up

In short, this means calculating a royalty fee as it would have been negotiated by the parties. This approach includes:

1. Determining a **market value** for the license, based on other **comparable granted licenses** for implementer of the standard, the “precedent”. Ideally, those licenses would have been on the same patent and similar products.
2. Not taking the contribution of third parties’ SEP patents in the product into account.

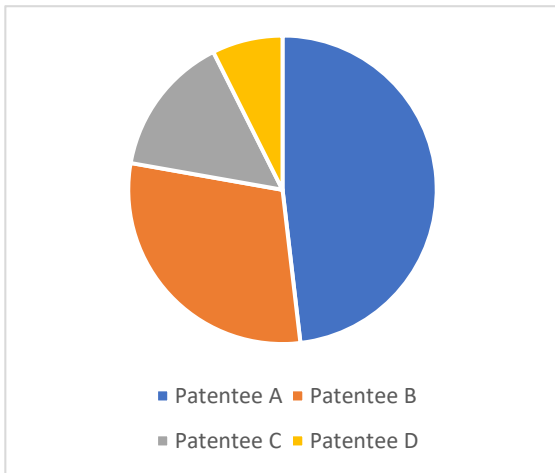
For example, it was found in US that this method should not take into account the value gained by the technology due to its incorporation in the standard, but its ex ante value. This is different from UK ruling in **Unwired Planet vs Huawei**.

In conclusion, this method is close to the traditional approach for evaluating royalty fees. It can be regarded as a good technique because the market price is taken into account for calculating the royalty fee. However, it requires previous granted licenses, which may not always be available as they are confidential or at the discretion of the patentee. Moreover, a “comparable” license is not always easy to determine and this raises many questions: is there any existing cross-license? for what size of licensees? for what products? in which markets?...

Top-down approach

This approach may be divided into two steps:

1. Evaluating a **total fee** or **aggregate royalty rate** that should be linked to using a standard including many SEPs of various patentees – the complete pie below;
2. Then **allocating a part** of the total fee to each patentee of the SEPs making the standard, according to the importance of their patents to the standard – slices of the pie below.



Total fee: The size of pie is fixed for a Standard.

Example: Ericsson contends that 3G standard is worth 5% of product price.

This approach has advantages. It avoids **royalty stacking** (i.e. royalties to pay to all SEP owners add up). It is useful when no or too few comparable licenses are available. However, it is difficult to evaluate the total fee in the first place.

Both methods have been used in a number of cases, but the bottom-up approach was preferred in the US. Recent US and UK decisions combine both ways.



PATENT LICENSE AGREEMENT

Evaluation of royalty fees

Examples

Example in the US: Modified version of top-down

Example case: TCL vs Ericsson²⁰

Ericsson is a Swedish owner of 2G, 3G, and 4G SEPs in the European Telecommunication Standards Institute, ETSI. TCL is a Chinese maker of mobile phones. In this US decision, it was ruled that, although the conduct of Ericsson did not breach their FRAND commitment, their licence proposal was not FRAND.

To evaluate FRAND royalty fee, the Court establish the following methodology:

1. Determining the total fee for each standard: 2G, 3G, 4G

For example, Ericsson suggests an aggregate royalty rate of 5% of turnover for 2G-3G patents that was found acceptable by the judge.

2. Calculating the total number of SEPs implemented in these standards, and that of Ericsson SEPs:

Total number of SEPs: 11469 family were declared as essential which was reduced to 7106 family when removing expired patents, non-US patents, not applicable to TCL products. A representative sample of families was analysed for assessing the essentiality. Finally, there were 365 families for 2G; 953 families for 3G; 1481 families for 4G. The part of Ericsson was found by weighting the number of SEPs to Ericsson with their interest for the standard and their coverage in 3 zones: US, EP, rest of the world. As a result, a small percentage of the total fee, i.e. of the 5% pie, was attributed to Ericsson.

3. Using comparable licenses to weight the results and check the “non-discriminatory” character.

Licences of Ericsson with other 6 firms (Samsung, LG, Apple, Huawei, HTC, ZTE) were considered, as they have a similar position as TCL in the market even if TCL was smaller and less famous.

The Judge then determined the final FRAND royalty rates for Ericsson’s SEPs, as indicated in the Royalties section final judgement¹⁹. For Example, for each end user terminals compliant with 4G sold in the US beginning January 2018, TCL shall pay Ericsson 0.45% of the net selling price.

²⁰ TCL vs Ericsson (21-12-2017): Case No. 8:2014cv00341 - Document 1813 (C.D. Cal. 2017) <https://law.justia.com/cases/federal/district-courts/california/cacdce/8:2014cv00341/584255/1813/>

Example in the UK

Example case: Unwired Planet vs Huawei²¹

The approach taken combines comparable licences and top-down methods:

1. Studying market prices of the patented technology, via comparable licences so as to obtain a first evaluation of the fee. This was made easy as Unwired Planet had bought Ericsson patents which had been subject to licences, hence providing many precedents.

Unlike the US evaluation, the UK approach did not include an ex-ante determination of the value of the patented technology. All granted licences were deemed relevant irrespective of the size of licensees. It was held that “Non-discriminatory” does not mean equality, but not disturbing competition. It was concluded that a FRAND licence must be worldwide.

2. Then, the Judge checked with help of the top-down approach that the first evaluation of the royalty fee does not imply royalty fee stacking:

- again, use of Ericsson public total fee for each standard (the “total pie”);
- percentage of Ericsson patents to total patents for the standard.

In conclusion, different fees for equipment or infrastructures, and for major or other markets were calculated.

For example, in Major Markets, the royalty fee for handsets incorporating 4G technology is 0.052% per handset sold in Major Markets (excluding China).

In this case, the royalty fees thus obtained are lower than US evaluation in the TCL vs Ericsson case to the extent that Unwired Patent has far less patents than Ericsson in the US decision.

AS A CONCLUSION...

Various methods are now available for evaluating the royalty fees for FRAND licences, and the case law provides useful tools. There isn't yet, as for today, any standardised model for evaluating FRAND royalty fees. For the time being, any evaluation remains on a case by case basis, but it is evident that this issue is not going away and with Courts, Industry Bodies and the EU Commission taking an interest, further clarity and certainty as to exploitation of technologies where SEPs exist should be forthcoming.

²¹ Unwired Planet vs Huawei (05-04-2017): EWHC 711, England and Wales High Court
<https://www.bailii.org/ew/cases/EWHC/Patents/2017/711.html>



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