

# VALUATION OF ESSENTIAL PATENTS IN SPANISH LAW.

## EUROPEAN PERSPECTIVE.

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**ABSTRACT** This study deals with the necessary adaptation of Spanish law to the new European regulations on FRAND licenses and focuses on the valuation of the so-called standard-essential patents (SEP). From the criteria followed in the USA and UK, our regulations must adapt to the valuation system in these new cases given the lack of rules and according to the European Union legal ordering. However, a consideration of the nature of such licenses is necessary first, that American and European doctrine put in the contractual field.

### 1. THE ASSESSMENT OF THE INFRINGEMENT IN OUR PATENT LAW.

If we adhere to the provisions of the Spanish Patent regulations (Law 24/2 015, of July 24 [3]), articles 74 to 77 establish the criteria for quantifying damages in cases of infringement. In this case, we are not talking about essential patents but patents without distinction. Who, without the consent of the owner, manufacture, import objects protected by it or use the patented procedure, will be obliged in any case to answer for the damages caused. Accordingly, the criteria to be followed will be:

#### 1.1. General Criteria

Compensation shall include not only the value of the loss suffered [E] but also that of the profit that has ceased to obtain (we use the percentage in the items) the owner because of the violation of his right [% L]. The amount of compensation may include, where appropriate, the investigation expenses [I] incurred to obtain reasonable evidence of the commission of the offense that is the subject of the judicial proceeding.

$$E + \% L + IP = DE$$

To fix the compensation for damages, the injured party will be taken into account:

a) Negative economic consequences, among them the benefits that the owner would have foreseeably obtained from the exploitation of the patented invention if there had not been competition from the offender [BF] or the benefits that the latter has obtained from the exploitation of the patented invention [BI]. In the case of moral damage, compensation will proceed, even if there is no proof of the existence of economic damage [DM], which necessarily implies proving, however, that moral damage [4].

Equating the two formulas we have:

$$E + \% L = BF = BI$$

Which also leads us to:

$$(E + \% L) + IP + DM \\ \text{OR} \\ BF + IP + DM \\ \text{OR} \\ BI + IP + DM$$

b) A lump sum [TA] that at least includes the amount that the offender should have paid to the patent holder for the granting of a license [Li] that would have allowed him to carry out his exploitation according to law. For its fixation, it will be taken into account, among other factors [Ot] the economic importance of the patented invention [II], the validity of the patent at the time when the infringement [Nt] began and the number [N] and class of licenses [C] granted at that time.

As we ponder the factors, Li is the complexity of these assumptions. In theory, the option for one or the other (choice says the law) should lead to the same result. Theoretically then:

$$[E + \% L = BF = BI = TA] \geq Li$$

We should exclude both the costs of research to obtain evidence and, on the other hand, the Moral Damage that would accrue to the result, although in the wording of the precept the latter is foreseen only for the first of the alternatives.

In this way, the minimum indemnity would be Li, which is the amount that the offender would have had to pay to the owner of the patent for concluding a license, plus the oral damages, plus the research expenses. This then leads us to consider the concept according to the following:

$$Li = \{ II, Nt, N, C, Ot. \}$$

Being:

*Other factors [Ot]*  
*The economic importance of the patented invention [II]*  
*The period of validity that the patent will detract from when the infringement began [Nt]*  
*The number [N]*  
*The class of licenses [C] granted at that time*

We should also consider that these amounts should be updated if necessary to the NPV (Net Present Value) as indicated in the Communication of the European Commission of 2017 [5].

It gives the impression then that our regulations use rules similar to the USA and European systems (after this Communication) although adapted to the Spanish nomenclature for the calculation of standard patents. In fact, the introduction of the element "other factors" allows for the consideration of those others that the Georgia case points [6] in the terms set out in the Ericsson case [7]. In any case, the weighting of all this will entail:

1°. That the value of the patent should be considered regarding of the economic value of the patented technology and not another. If it is a minor technology

or improvement or development of the standard will be weighted the importance of it in the set.

2°. You must be compensated for the updated totality of the offending period in your case and in any case assess the possible standard license from a value also updated.

3°. The weighting includes the general aggregate valuation of said technology and therefore considering a common maximum cumulative rate based on the patents that can be conceived or expected and those that already exist.

## 1.2. Benefits trade.

To fix the profit not obtained (according to the criteria established in article 74.2) the calculation of the benefits may be included, in the proportion that the court deems reasonable, those produced by the exploitation of those things from which the invented object constitutes an essential part from the commercial point of view. The assessment will be different if we use unit or group criteria. The Courts of the USA have been using the criterion by unit and not *ad valorem* as a way to avoid payments that are considered too high when applied to the whole price of the product. However, in the so-called standard patents, the situation would change [8] because royalties calculated *ad valorem* could help lower value to pay and more incentives to innovate. And this would lead to greater consumer welfare. Thus, when the infraction occurs in the downstream, in these cases a calculation of the value of the damage from the percentage on the totality of the product that has been affected may be more beneficial than the percentage calculation on the license (in fixed fee) on the specific component. It can also occur in other circumstances in the oppositely, taking into account the existence of substitutes and the need for the component for the final product. That is to say that the final conclusion is, therefore, an assessment of the *ad valorem* damage, on the whole, assuming that all the components of the product are necessary for the commercialization of the same, which can vary according to the cases (first weakness) and that do not exist substitutes to the effect (second weakness). It is understood, however, in our law, that the invented object constitutes an essential part of a good from the commercial point of view when the consideration of the incorporated invention supposes a determining factor for the demand of it.

## 1.3. The compensation for loss of prestige.

The owner of the patent may also demand compensation for the damage (ID) that involves the loss of prestige of the patented invention caused by the infringer for any reason and, especially, as a consequence of a defective performance or an inadequate presentation of the latter in the market. This would imply that whatever the calculation that is made (even with lack of exploitation) is added to the calculated amounts.

(E +% L) + IP + DM + ID

## 1.4. Deduction of compensation already received.

Of the compensation due by the person who has produced or imported without the consent of the owner of the patent the objects protected by the same, the compensation that he has received for the same concept will be deducted from those who exploited the same object in any other way. These assumptions will have been taken into consideration and will be taken as such in two cases:

1°. This is the doctrine of the pass-on although it is specified in cases of covered indemnities.

2°. They have been taken into consideration in the corresponding percentages applicable to L and the elements that we have called "the compensation".

## 1.5. The dependence on patents and compulsory licenses.

By article 65 LP, the fact that the invention subject of a patent cannot be exploited without using the invention protected by a previous patent belonging to a different owner will not be an obstacle to the validity of the invention. In this case, neither the owner of the previous patent may exploit the subsequent patent during the term of the latter without the consent of the owner, nor may the owner of the subsequent patent exploit either of the two patents during the term of the previous patent, not be with the consent of the owner of the same or have had a compulsory license. Thus, Article 93 LP states that when it is not possible to exploit the invention protected by a patent (or plant variety) without prejudice to the rights conferred by a patent or by an earlier plant variety right, the owner of the subsequent patent may request a patent, a compulsory license, for the exploitation of the object of the patent or of the variety vegetal subject to the previous plant variety right, by means of the payment of an *adequate fee*.

The applicants for the licenses referred to in the previous sections must demonstrate:

a) That the invention or variety represents significant technical progress of considerable economic importance about the invention claimed in the previous patent or protected by the previous plant variety right.

b) That they have attempted, without obtaining it within a prudential period, to obtain a contractual license from the owner of the patent or the previous plant variety right under the terms provided in article 97.1. This will not be necessary for our legislation, but contrary to what is stated for essential patents in the HUAWEI case by the CJEU, among others, in cases of need to end practices that a firm administrative or jurisdictional decision has declared contrary to national legislation or community defense of competition.

When the granting of a compulsory license by dependence is applicable, also the owner of the patent or the previous right of plant variety may request the grant, under reasonable conditions, of a license to use the invention or the variety protected by the patent or by the right of later plant variety.

## 2. THE ASSESSMENT OF THE INFRINGEMENT OF AN ESSENTIAL PATENT.

## 2.1. The doctrinal criteria of valuation.

As already indicated by the Attorney General in his Opinion in Case C-170/13 "... if one relies solely on the disposition to negotiate of the alleged offender, prices would be established that are significantly lower than the economic value of the SEP. On the other hand, if one is based on the Orange-Book-Standard jurisprudence of the Bundesgerichtshof, the problem that would arise would be inverse given that very high license fees would be imposed (although not to the point of constituting a refusal to contract, contrary to the article 102 TFEU). "Accordingly," ... the pure and simple application of the Orange-Book-Standard jurisprudence of the Bundesgerichtshof or the press release to the present case would give rise, respectively, to situations of over or under protection of the holder of a SEP, of the users of the technique of the patents or of the consumers. "All this leads us to consider that the valuation of a standard patent cannot follow, for these reasons, valuation criteria similar to those of licensing or patents or infringement thereof, for these reasons [9]. Following in this matter the study carried out by some authors [10] we could distinguish three lines of work in the framework of the valuation of patents: A first group would consider that valuation as the estimation of the economic value in function of the different data that could be obtained by indirect line through databases or by direct lines through field surveys. This would lead us to two different subgroups: on the one hand, the consideration of patent families (Grefermann et al., 1974, Schmoch et al., 1988, Putnam, 1996, Harhoff et al., 1999) and renovations (Pakes) and Schankerman, 1984); and a second subgroup that would distinguish the value according to the field survey from inventors (Harhoff et al., 2002; Brusoni et al., 2006; Gambardella et al., 2006) or experts (Reitzig 2003). The objective to achieve is the symmetry of the information obtained which is difficult and the linkage, dependence or reciprocity of other patents that would not be taken into account. Within all of these assumptions, the dating regime (that is, received by a patent) stands out as the most popular indicator of the value of the patent. [11]. The existing correlation [12] between those direct citations and the value of the patent or the industrial value of the same part of the consideration of the fact that if the same serves for other subsequent technological developments where it is cited or to limit or delimit other patents when The examiner who has to register uses them and points out that it is notoriously important or is having it for such development and therefore carries in itself (capture) the technological value of it [13].

A second group would consist of a patent count and its weight to analyze the impact of innovation and IP rights on the value or growth of the companies that implement it. To do so, experts in this field have evaluated the correlation of the different characteristics of patents with a firm value (Griliches 1981, Griliches et al., 1986, Narin et al., 1987, Trajtenberg 1990, Lerner 1994, Lanjouw and Schankerman. 2004, Hall et al., 2005), introduction of new products, creation of new companies (Shane 2001) or monetary evaluation of the inventors, in an attempt to validate the use of more accessible data in the value-weighting schemes. The characteristics of patents considered in this regard include citations

received from subsequent patent filings (Trajtenberg 1990), legal disputes such as patent oppositions (Harhoff et al. 2002, Graham et al. 2002) and litigation (Lanjouw and Schankerman 1997) and the number of claims. (Lanjouw and Schankerman 2004).

A third group builds on the above by taking the proposed and correlative indicators as valid and axiomatic and using them to obtain different determinants or patterns in the value of the specific patent (Guellec and van Pottelsberghe 2000 2002, Maurseth 2005, van Zeebroeck and van Pottelsberghe 2008).

All these assumptions start from our understanding of an average valuation, not individualized, denatured of the context of the innovation and the protected legal interest that essentially is looked for with the normalized essentiality. Nor does it pay attention to the weighting of the cost of research both until it is obtained and in the future development, improvement and new related patents or the possibilities derived from the markets in which we operate so that the implementers use them and make them possible in the market, for the common use of the consumers or customers affected.

## 2.2. An approach to quantification.

An interesting assumption is the way in which we must measure the damages in behaviors that affect the royalties derived from license agreements [14]. The approach starts by distinguishing whether it is measured from the total value of the product or from the value of the technological improvement that contributes to them. An important study [15] on this concludes that both one and the other would lead us to the same result in certain circumstances but that this traditional conception is not true for most of the cases. In most cases, says the study, the *ad valorem* calculation produces greater welfare in the market compared to the result obtained in the calculation per unit both in terms of lower prices and stronger incentives for companies innovate [16]. In an analysis of an innovator that grants licenses to a producer, the bargaining power of the royalty has the former. In this way, incentives for innovation (R & D) will lead to *ad valorem* royalties (on the totality) favor the innovator, while the royalties per unit tend to benefit the producer. It also concludes that the resulting price in the final market is never higher in the royalty calculated *ad valorem* than in the other method, precisely because the former imposes a similar assumption to a tax in the margin that the producer can obtain, which will reduce the profitability of price increases [17]. The study above focuses essentially on the fact that US courts have been using the unit criterion and not *ad valorem* as a way to avoid payments that are considered too high when applied to the product price as a whole. However, in the so-called standard patents, the situation - according to the study - would change because the *ad valorem* calculated royalties could help a lower value to be paid and more incentives to innovate. And this would lead to greater consumer welfare.

Thus, when the infraction occurs in the downstream in these cases a calculation of the value of the damage

from the percentage on the totality of the product that has been affected may be more beneficial than the percentage calculation on the license (in fixed fee) on the specific component. It can also occur in other circumstances in the opposite way, taking into account the existence of substitutes and the need for the component for the final product. If we start from a fixed percentage of 20% on the part of the product with a license and a sale of 1000 unit to 10 euros (the component) each, it will result that the payment to be made is 2000 euros. If the percentage is for the units sold and the total value of the product at 20 euros (all components), the result is different, except for isoelastic assumptions; thus, an equal percentage takes us to 4000 euros but normally the percentage will be lower than that fixed for the specific component precisely because it depends on the market power of the innovator, the existence of substitutes and the need for that specific component for the global product. Based on this we could understand that 10% would lead us to the same result but normally it will be qualified according to the previous one, setting a competitive percentage, surely scaled and displacing the higher cost from the producer to the innovator.

### 2.3. The added problem of the portfolio.

The Communication also highlights the need to consider the portfolio in global terms. In terms of it " *The lack of general will or non-acceptance to offer or accept all the SEPs that a licensee needs may be an indication of bad faith. To be a FRAND license, the counteroffer must be related to all the SEPs that a licensee needs and cannot be based on individual patents only. However, portfolios should not include competing technologies, but only complementary technologies if necessary. While potential licensees can always question the validity / essentiality of individual patents, the license of all SEPs that a licensee needs can be particularly efficient. Therefore, the Commission will work with interested parties (including appropriate courts, arbitrators and mediators) to develop and use coherent methodologies, such as sampling, that allow efficient and effective SEP dispute resolution, in accordance with industry practice. of portfolio licenses.*" This implies the need to make a complementary effort by implementing global valuation systems of said portfolios that also represent an improvement in competitiveness and a significant reduction in transaction costs that would be negotiated country by country. The specific requirements may vary depending on the individual case, but the Commission believes that to evaluate a FRAND offer and make an appropriate counter-offer, clear explanations are needed on: the essentiality of a standard, the products allegedly infringing the SEP user, the calculation of royalties proposed and the FRAND non-discrimination element. Much of the discussion of the April 5, 2017, issue of the HC UK (Unwired Planet vs. Huawei) addressed both assumptions: " *Apart from the rate, the question of scope is the most significant point in the case. The parts are diametrically opposed. Huawei is willing to take a license under the UK patent portfolio of Unwired Planet, but only the portfolio of the United Kingdom. Unwired*

*Planet wishes to grant a global license and maintains that they have the right to insist on it. " The result, for these purposes, for calculating the royalty in said resolution is based on considering a basic reference in the corresponding portfolio in terms of that we have previously indicated.*

## 3. ADAPTATION IN SPANISH LAW

### 3.1. Problems and solutions. Legislative Vision.

Following the WIPO Report of 2009 [18], "*from the point of view of policy, the main objective seems to be the promotion of innovation and the general application of the rules, taking into account the interests of: i) the patentees to exploit patents and enjoy their benefits; ii) third-party producers wishing to manufacture and sell products compatible with the corresponding standards at a reasonable price; and iii) the public seeking the greatest possible number of options affordable and interoperable products. Furthermore, to promote innovation, a market environment that ensures healthy competition through standardization should not be jeopardized, for example, if possible price agreements reached during the standardization process may exclude third parties of that process* [19]" In the face of conflicts that may arise there are different solutions: a) One of these approaches is to improve the self-regulatory mechanisms of standardization bodies to increase transparency and accessibility to patented technologies. Many standardization bodies have adopted patent policies that encourage disclosure fast essential patents and patent applications and seeking assurances patentees to commit to certain conditions in the licensing, as they are reasonable, non-discriminatory (RAND) terms or fair (FRAND conditions). b) A second approach is to look for useful and practical solutions in the market. Thus, for example, to address the issue of the large accumulation of royalties in the application of standards, a consortium of patents can be formed to reduce transaction costs, or concession agreements can be entered into. Reciprocal licensing in the case of two parties hold patents that prevent the activity of the opposing party. c) A third approach that has been studied involves the application of legislative measures, whether internal or external to the patent system. The latter relates in particular to competition law, which addresses certain aspects of the problem, such as the abuse of dominant position in establishing licensing rights.

The solutions indicated are **obviously contractual** among the interested parties whose purpose is to increase legal certainty to efficiently and effectively apply standardized technologies. The observance of these contracts is governed by the current contract law. On the other hand, contractual solutions can only bind the contracting parties, and the negotiating capacity of the interested parties can be unequal. In our law, the entryways of these assumptions can be seen through the systems of the concession of contractual licenses, by full right and compulsory licenses included in the Patent Law. In what concerns here, the fixation of the value of the same has

peculiarities that are not completely by the RAND O FRAND valuation that we have been studying.

### 3.2. The system of licenses in Spanish law and the criteria of valuation in consequence.

To say that our regulation already includes a system that gives entry to the assumptions that may arise in this matter is saying a lot. Even taking into account the system of mediation or arbitration planned [20], the exclusions (articles 4 and 5 LP) or the types of licenses that are included in it. Beyond the license as a contract provided for in article 83 LP (which implies the will between the parties subject to a regime that does not necessarily foresee the SEP system in terms of the essential patent ) or full licenses (articles 87 a 89) , that are processed by the office and can be withdrawn and also start from the voluntary offer of the owner without regard to its essentiality, our law only provides a new assumption in Article 91 c) LP that takes into consideration that essentiality from the unique perspective of the defense of competition: "*Need to end practices that a firm administrative or jurisdictional decision has declared contrary to national or EU competition law.*" It had noted the aforementioned Judgment of the HC UK of 2017 that "*The boundaries of FRAND and competition law are not the same. A rate may be above the FRAND rate but not contrary to competition law.*" Nor is it a dependent patent under the terms provided in articles 65 and 101 LP: "*The fact that the invention subject of a patent cannot be exploited without using the invention protected by an earlier patent belonging to a different owner will not be an obstacle to the validity of the former. In this case, neither the owner of the previous patent may exploit the subsequent patent during the term of the latter without the consent of the owner, nor may the owner of the subsequent patent exploit either of the two patents during the term of the previous patent, not to have the consent of the owner of the same or have had a compulsory license.*"

The only way part of Article 66 LP: "*The exploitation of the object of a patent cannot be carried out in an abusive manner or contrary to the Law, morality, public order or public health, and will be subject, in any case, to the prohibitions or limitations, temporary or indefinite, established or that are established by the legal provisions.*" And he would abuse his position who holds a patent that is essential in terms of the aforementioned COMMUNICATION: "*A patent that protects the essential technology for a standard is called standard-essential patent (SEP). Therefore, SEPs protect technologies that are essential to comply with technical standards and to market products based on these standards.*" These standards are technical specifications adopted by a recognized standardization body, of repeated or continuous application, whose observance is not mandatory, and which refers, among others, to technical specifications understood as documents that prescribe the technical requirements that must be met product, process, service or system and that establishes one or more of the following aspects:

a) the characteristics that a product must have, such as the levels of quality, performance, interoperability, environmental protection, health and safety and its

dimensions, as well as the requirements applicable to the product with regard to the denomination used to describe it sells, terminology, symbols, testing and testing methods, packaging, marking or labeling and conformity assessment procedures;

(b) the production methods and procedures for agricultural products, defined in Article 38 (1) of the TFEU, of products intended for human and animal nutrition and medicinal products, as well as production methods and procedures related to the other products, in case of these influence their characteristics;

c) the characteristics that a service must have, such as the levels of quality, performance, interoperability, protection of the environment, health or safety, as well as the requirements applicable to the provider with regard to the information that must be provided to the recipient, such as specified in Article 22, paragraphs 1 to 3, of Directive 2006/123 / EC;

d) the methods and criteria for assessing the performance of construction products, as defined in Article 2, point 1, of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011, which establishes harmonized conditions for the commercialization of construction products), in relation to its essential characteristics; From our point of view, therefore, the interdiction of patent law and those standards and FRAND licensing assumptions would not exist in our law.

### 3.3. The need for a legal and economic adaptation to the concept.

According to current literature, FRAND commitments are just that and therefore do not create a license, but simply leave open the possibility of it. Thus, the key question is whether the FRAND commitment creates a contract or simply prescribes the duty to negotiate or grant and obtain a license in good faith. We start with base agreements, concrete contents, of the members of the SDO to comply certain rules regarding the ownership of IP and its applicability is initially a matter of contract law (Lemley, 2002 [21]). In other words, the FRAND contract between a SEP holder and an SDO defines the rights of the implementer, as a third beneficiary of the FRAND contract, to receive access to the essential technology of the SEP holder (Sidak, 2015 [22]). This also leads us to consider whether once the relevant standard is adopted, the implementer and potential licensee external to the SDO (who has not signed) can try to enforce the promise of the patent holder as the external beneficiary. And if all this is applicable or is regulated in our law taking into account that in the same there is no recognized that figure and that all types of licenses must be raised from the intervention of the Spanish patent office, even in the possible fixing of the payment that has to be done [23]. As indicated by the study of the European Commission 2017 [24] to the effect "*The economic literature on the role of FRAND can be divided into two different research streams: first, a research body analyzes the implications of the FRAND license terms to see the economic incentives to develop and contribute technologies standardized Second, another research body analyzes the specific market failures in determining the applicable rates; and, in particular, the risks of accumulation of royalties and patent retention.*"

*This literature attempts to formulate an interpretation of FRAND, which minimizes the impact of market failures and restores license terms, which would result from a competitive technology market.* " That is to say that we start from a new figure in our law, where the private privileges against the public nature of our licenses, with an offer that starts from a specific content managed by grouping this type of essential patents and that in principle will link to who is a member thereof with respect to third parties who adhere to or subscribe to it but which will also be applicable to those who implement it but have not subscribed it, trying to avoid, in this section, that the innovator will collect excess royalties by accumulation and that the implementer will benefit from its use without paying, paying late or pretending to negotiate to delay or take advantage of the time elapsed in that negotiation.

It is recognized that the licensing regime is the regulatory principle of our right to be able to use the owner's patents. But its regulation is only the principle to achieve, in these cases, a new more balanced regulation. In this case, it has been pointed out that we should consider both the " *equitable estoppel* " and the " *implied license* ". The first would be applicable in cases of infringement for conduct contrary to the use of said patent (both by the owner and by the implementer) within the framework of an SSO. However, the second part of considering that the same declaration of said patent as essential and the FRAND terms implicitly imply a license to anyone who wants to use it provided that it pays a fair and reasonable fee that will not have to be the one fixed in that license if it is not as well as that which derives from a previous negotiation to that effect. In accordance with the latest work on the subject [25], it would result that a FRAND commitment is not a license, but when a patent owner makes a FRAND commitment, this would act as a conditional agreement not to sue, for which the patent owner promises not to sue standard implementers for infringement unless good faith in negotiation fails. The treatment of patents in the context of setting standards would then be, for the author cited, a fifth area in which rights cannot be characterized as only *in rem* or only *in personam* . When a patent is declared essential for a standard, the patent holder has future rights that the law must protect against an undefined set of potential offenders, and all those who adopt the standards have a duty to respect their IP rights. When the owner of a patent signs a license with a standard adopter, this creates a mandatory personal relationship with the terms already defined. This makes us have a FRAND commitment perception as a hybrid that has the qualities of property and contract. In this way we find a prior commitment between the owner and the SDO entity and a right of potential licensees in the form of a multilateral relationship based on a servitude granted by the owner of the patent.

The recent doctrine of the CJEU (HUAWEI vs. ZTE [26]) starts by considering a transcendental change in the classic view of the precautionary measures to be adopted for patent infringement, understanding that in these cases the negotiation capacity of the parties should not be altered when they are willing to subscribe this type of contracts.

Against this regulation, some authors have recently been shown [27] considering that it is simply an

economic and non-normative issue and that its regulation would entail a disincentive to investment contrary to the market and consumers.

#### 4. POSSIBLE METHODS OF CALCULATION FOR A LEGISLATIVE REVIEW IN SPAIN [28].

##### 4.1. General Criteria

From the previously studied perspective and the international framework in which these valuation assumptions are being developed, we must consider that our regulations are, in this respect, obsolete and that it is necessary to address a possibility of adequate valuation beyond what it has for these new instruments and institutions that are not only being developed but also recognized in the European Union regulations and the CJEU doctrine. Based on the fact that the valuation in these cases is not an exact science and is thus recognized, for this calculation we must take into consideration the disposition of the implementer to be paid and also the disposition of the holder to grant the license (*Bargaining range*). And also, that this normally occurs after having incurred costs in the offending product. From there, the following steps would be taken into account:

*First:* That there is no agreement between them and that the implementer will want a lower cost as possible while the owner will want it the higher, the better.

*Second: Incremental value and stand-alone value of the patent.* We consider then that willingness to pay the implementer as for the profit obtained from said implementation of the patented or the greater benefit obtained by adding the same to its products. That greater benefit will be the difference between the benefit obtained without the patent and the one obtained with it. But not necessarily that greater benefit coincides with the increase in the value of the infringing product. The contribution of the patented characteristic to the value of the infringing product may be greater than the contribution of the patented characteristic to the benefit of the offender (for example, due to the higher cost of producing the good with the patented characteristic, or because parts of the incremental value is displaced to consumers or other companies in the value chain), or it may be lower (for example, if the patented characteristic generates additional sales, that is, if the inclusion of the characteristic changes not only the price, but also the quantity of the product offender). The willingness to accept the patent holder corresponds to the greatest possible benefit that the patent holder could have obtained by refusing to grant the license. In the FRAND context, this is only possible if the patent holder refuses to make the patent available for inclusion in the standard. The willingness of the patent owner to accept in the hypothetical negotiation is determined by the independent value of the patent.

*Third:* The rate set should be such that it maintains both the patent holder's incentives to innovate (as an essential issue) and make available its patented technology for inclusion in the standard (also the right of the developer and will go to the benefit of the consumer and the market), and the implementer's incentives to implement the standard without unnecessary delays. To preserve the incentives to

innovate, the rate must exceed the cost of R&D (adjusted for risk, etc.) as a general criterion and it should be considered that the lower end of the efficient rate range is the greater of the amounts between the value independent of the patent or the specific R&D cost of the standard, including investment in specific research and development of the standard. But this will give rise to three different assumptions to consider: a) First, the cost of R&D may exceed the willingness to pay of the implementer. In this case, the benefit of including the patented feature in the standard does not justify the cost of its development; and the rate should not cover the total cost of R&D. The willingness to pay off the implementer is the ceiling for a FRAND royalty, and it is the highest royalty rate compatible with economically efficient incentives. b) Second, the cost of R&D may be less than the independent value of the patent. In this case, the patent would have occurred independently of the standard; and the rate only needs to preserve the incentives of the patent holder to contribute the patented feature to the standard. c) A third assumption would be one in which the cost of R&D is within the range of a hypothetical negotiation between the parties. In this case, the patented feature would not have occurred independently of the standard, and the independent value of the patent is not sufficient to compensate the owner of the patent for R&D; but the patented feature within the standard adds enough value to the product to justify the cost of R&D. A socially efficient royalty rate must be set high enough to offset the cost of developing such a characteristic. The rate must at least correspond to the cost of R&D to be socially efficient.

Fourth: We must finally consider that there is no disposition to hold (hold-up), to the hold-out strategy or accumulation of royalties (stacking) that could therefore affect any of the values we have indicated.

#### 4.2. Sources for its calculation.

First, it means that the calculation we have been referring to is - or should be - *ex-ante*, so that the sources for the subsequent calculation will serve well to prove judicially that it is adequate as a guide or reference both in litigious cases and in comparative cases. In general, there are two data sources that provide information to calculate a rate for a specific case: 1<sup>o</sup>. The market prices of the product; and 2<sup>o</sup> the prices of comparable licenses. Therefore, we work, as we can see, with results after fixing the rate but which can also be used for its construction.

##### 4.2.1. Price of the product.

Product market prices include prices of infringing final products or prices of smaller components [29]. Therefore, the steps to follow will be:

1<sup>o</sup>. *Choice of royalty base*. It is the option based either on the price of the product itself or on the price of the patented components. When using product market prices to identify the FRAND range, it is important to note that product market prices can only provide information for one of the parties, in this case, the implementer: the prices of the products can provide information on the value that a patented feature adds to

a product (or component) and can thus reveal the willingness to pay the manufacturer of the final product for the patented feature. The market prices of products (final product or component) do not provide any information about the willingness to accept the patent holder, which is a function of alternative standards or other uses that were available to the patent holder instead of putting the patent for the standard is available. The price of products that comply with the standards does not provide information on R&D costs or on the hypothetical value of alternative technologies, not related to the standard. Therefore, the prices of the product market (product or final component) can only reveal the upper limit of the reasonable range of rates: they can indicate the value that the patented characteristic adds to a product; a rate that exceeds this value is not a reasonable rate.

From there and in the development of the doctrine of the USA Courts we can see two systems of choice called, on the one hand, the Rule of the Full Market Value (EMVR) and on the other hand the Smallest Marketable Patent Practice Unit (SSPPU). The EMVR establishes that when a patented characteristic does not in itself determine the demand for a final product, the value of the final product must be assigned to the patented characteristic. The SSPPU is a probationary rule developed much more recently by the Federal Circuit, which often requires patent owners to make this distribution by choosing as the basis of the rates the price of the smallest product component, which directly implements the patented invention. While EMVR and SSPPU are concepts that emanate from the jurisprudence of the US. In the US, the new policy of IEEE SA follows closely the idea of the SSPPU and it maintains that the FRAND rates must be evaluated by reference to the price of the product that can be sold the lowest. This policy will apply to SEP owners and implementers of IEEE standards anywhere in the world.

2<sup>o</sup>. It will be necessary to determine if that base, whatever it is, helps us to value the technology that is implemented, otherwise, it will not be useful. The price of a component smaller than the final product will give us information only if the price of the component reflects the cost of accessing the technology or if the manufacturer of the component has considerable market power.

A model proposed for this purpose [30] compares the gains obtained with the implementation of the technology concerning the counterfactual that the sale would entail without that implementation. We start then from the profits expressed according to the following:

$$\pi_1 = q(p - pc - c)$$

Where  $q$  is the quantity of the products sold,  $p$  is the price of the final product,  $pc$  is the price of the component that is implemented and paid as a patent and  $c$  is the cost per unit of product.

If we did not use the technology we are evaluating, the profit would be different:

$$\pi_{NI} = \hat{q}(\hat{p} - c)$$

In this case, we would no longer collect the value of the technology used and patented and the quantity and price of the product are established from a counterfactual framework.

The difference between the gains derived from that implementation and those derived from the counterfactual framework would be the gains that derive from said implementation:

$$\pi_I - \pi_{NI} = q(p - p_c - c) - \hat{q}(\hat{p} - c)$$

If we divide this by the specific quantity of units sold, it would give us the unit rate that the implementer would be willing to pay:

$$\hat{r} = p - p_c - \frac{\hat{q}}{q}\hat{p} - \left(1 - \frac{\hat{q}}{q}\right)c$$

More easily we could compare the final prices of the offending product minus the price of the product in a counterfactual framework without infringement less the price of the technology implemented.

$$r_{\text{reasonable}} = p - \hat{p} - p_c$$

The value of the latter will always be less than the previous one:

$$\begin{aligned} \hat{r} - r_{\text{reasonable}} &= p - p_c - \frac{\hat{q}}{q}\hat{p} - \left(1 - \frac{\hat{q}}{q}\right)c - p + \hat{p} + p_c \\ &= \left(1 - \frac{\hat{q}}{q}\right)(\hat{p} - c) \end{aligned}$$

In the previous one, we find that,  $\frac{\hat{q}}{q}$ , it will always be a value between 0 and 1 and will always be greater than 0.

However, the price of the infringing component will not always be or will be reasonable, precisely because some of these factors will be less than 0. Thus:

$$\begin{aligned} r_{\text{Component}} &\equiv p_c \\ \hat{r} - r_{\text{Component}} &= p - 2p_c - \frac{\hat{q}}{q}\hat{p} - \left(1 - \frac{\hat{q}}{q}\right)c \end{aligned}$$

In this way, it will turn out that:

$$-\frac{\hat{q}}{q}\hat{p} - \left(1 - \frac{\hat{q}}{q}\right)c < 0.$$

And this is because the price of the component is simply a cost of the final product.

#### 4.2.2. Comparable licenses.

Existing prior licenses in homogeneous situations it is evident that fixing the basis of the rate is easier, much more so if it is concerning other licenses negotiated between the same parties. However, this usually does not happen and on the contrary, the comparison occurs once the infringement has occurred and not before it. Comparable licenses are a good indication of the value

of the patented feature if they indicate the *ex-ante* provision to be paid by an implementer to gain access to the patented feature. If the license is negotiated *ex-post*, once the implementer has already incurred implementation costs, the license may reflect more than this *ex-ante* provision to be paid, and also include a withholding value (hold-up [31]). This risk has led some commenters to reject licenses negotiated under threat of injunctive relief as a comparable license, because these licenses may, in fact, reflect such retention value. On the other hand, if the license is negotiated *ex-post*, and the alternative for the implementer to sign the license is a continuous infringement, the price of the license does not reflect the previous provision to be paid by the implementer to access the patented function, but only the willingness to pay to waive the available resources for patent infringement. This induces a risk of perfect circularity. The willingness of implementers to pay for the patent licenses they have already used is determined by their incentive to waive litigation with a resulting award of damages. The willingness to pay of the implementers of the SEP licenses, and therefore the observable rates, is, therefore, a function of the expected damages. At the same time, the damages are calculated based on the current rates, generating a strategic situation that is solved rather by the theory of games.

If the calculation of the value is made based on the value of the license that was given:

	Damages	Negotiation
Previous License	0	1
Without prior license	1	Between 0 and 1

If we start from a cost 1 of the SEP license through a FRAND agreement, we would have that the value of what it should pay would be 1 if we take that comparison into consideration. Otherwise, the said comparison leads to the value of that license would be 1. Therefore, when there is no license and we must assess the damage fixation would be 1 (or its percentage depending on the time of use), There may always be a negotiation to avoid the judicial procedure and this could be convenient for both the offender and the owner due to uncertainty, expenses and costs, etc. The offender will agree to any result derived from a negotiation that is less than the amount that can be fixed of damages in a future procedure. Therefore, your best strategy could be: a) Wait to see if the same is required. b) Try a negotiation to lower the value of the license. c) In any case, the future procedure will set a comparable license amount which calculates the damage is already determined as the maximum point of said negotiation.

Under the threat of a judicial proceeding with precautionary measures, we would have:

Willingness to pay	Implementer	Headline
Previous License	0.5	1
Without prior license	1	2

In the previous case, although the implementer would be willing to pay the value of a license that was initially valued at 1, the Holder under this threat of



precautionary measures will increase to 2 once the implementer has incurred costs that will ultimately entail a higher levy. If it does not eliminate that precautionary measure that prevents it from continuing exploitation and therefore stops incurring losses. The precautionary measures therefore distort the system for the effectiveness of an agreement in this regard and will mean a greater gain for the owner that would have been obtained had an agreement been reached. It, actually, has a punitive effect on the implementer.

In our law we can consider that an adequate measure that counteracts this position is the substitute surety of articles 745 and 746 LEC, although it can also have the perverse effect of positioning in the market, that is, it can be convenient for the implementer to position himself in the market. The market initially and wait for that precautionary measure and after it offers substitute bail that allows you to remain positioned in the market, knowing that at most you will pay the damage based on the calculated price or the system of comparable licenses.

## 5. CONCLUSION.

Given all this, we could well conclude that the regulation in Spain of the assumptions of this type of essential patent licenses does not have a specific regulation that identifies, catalogs and develops that are not the indications of the European Commission and the CJEU.

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[3] [https://www.boe.es/diario\\_boe/txt.php?id=BOE-A-2015-8328](https://www.boe.es/diario_boe/txt.php?id=BOE-A-2015-8328)

[4] The STS of July 10, 2012 states in this regard that under judgment no. 1031/2002, on October 31, which also stated, "the concept is clear and strict; does not include aspects of material damage. (STS, Civil section 1 of June 05, 2013 (ROJ: STS 3339/2013) Resource: 187/2010 | Speaker: XIOL RIOS)

[5] Communication from the Commission on November 29, 2017. Setting out the EU Approach to Standard Essential Patents.

[6] Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 27 1116.1120 (SDNY 1970), modified, 446 F.2d 295 (2d Cir. 1971). Chapter 7, Section II.

[7] Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201 (Fed. Cir. 2014). Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc. (CSIRO), 809 F.3d

[8] LLOBET G & PADILLA J, *The Optimal Scope of the Royalty Base in Patent Licensing* 59 JL & ECON. 45, 46-47 (Feb. 2016). "In short, a per unit component fee increases the marginal cost of the end-device manufacturer on a one to one basis. Part of that increase was passed on to final consumers in the form of higher prices. A fixed fee does not affect the marginal cost of the end device manufacturer and hence has no impact on end-device prices. Ad valorem fees also reduce the margin of the end device manufacturer, which will require an offset to that reduction by raising prices but its incentive to do so is weak because of an increase in prices. As a result, these fees will increase the final price, but the magnitude of that effect will be smaller than with per unit fees."

[9] On the possibility of control only through the vine patent regime: SUÑOL A. << Patents and Antitrust: The Huawei case c. ZTE Corp >> <http://almacenederecho.org/patentes-y-antitrust-el-caso-huawei-c-zte-corp/>

[10] N. van ZEEBROECK. << The puzzle of patent value indicators >> CEB Working Paper No. 07/023 April 2009.

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- [11] Against these analyzes and for the existence of inbreeding reasons for it vid: Firstly, SEPs are more "visible". Secondly, companies may direct their research towards existing SEPs, hoping that new research is valuable for products related to (popular) standards, and perhaps even become SEPs for newer releases of the standard themselves. RYSMAN M & SIMCOE T. (2008). Patents and the Performance of Voluntary Standard-Setting Organizations. *Management Science*, 54 (11), 1920-1934.
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- [14] We refer essentially to the assumptions of Standards-essential patents (SEP) defined by (COM (2016) 176 of 19.4.2016), as essential for use in new technological elements.
- [15] LLOBET G, PADILLA J, "The Optimal Scope of the Royalty Base in Patent Licensing" <http://www.journals.uchicago.edu/doi/pdfplus/10.1086/686306>
- [16] A practical study of this can be seen by DOUGLAS H, GINSBURG et al, "A Comparative and Economic Analysis of the US FTC's Complaint and the Korea FTC's Decision Against Qualcomm" <https://awards.concurrences.com/IMG/pdf/cpi-wong-ginsburg-layne-robins-slonim.pdf>
- [17] In the classic tax literature it can also be seen that when there is market power, ad valorem taxes (such as the value-added tax) are preferred over taxes per unit, since they allow the same income to increase through lower final prices. Suits, DB, and RA Musgrave. 1953. "Ad Valorem and Unit Taxes Compared." *Quarterly Journal of Economics* 67: 598-604. CrossRef
- [18] [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_13/scp\\_13\\_2.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.pdf)
- [19] "Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition", from the Department of Justice of the United States and the Federal Trade Commission, April 2007, p. Four.
- [20] Chapter IV of Title XII of the Patent Law deals with arbitration and mediation as mechanisms for the extrajudicial resolution of disputes. Consequence of this is the amendment of Law 17/1975, of May 2, creating the autonomous Organization "Registry of Industrial Property (today OEPM) to include among its purposes the promotion of mediation and performance as an arbitration institution and in accordance with Law 60/2003, of December 23, on Arbitration, the functions that by royal decree are attributed to it for the resolution of conflicts related to the acquisition, contracting and defense of Industrial Property rights in matters of free disposal. The regime, however, is made official considering that the mediation agreement signed by the mediator and the parties, once it has been publicly certified or approved by the Judge, is constituted as an enforceable title in accordance with the provisions of Law 5/2012, of July 6, mediation in civil and commercial matters and must be communicated to the Spanish Patent and Trademark Office to proceed with the execution thereof
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- [23] Only by analogically applying a mix of characteristics of each of the figures allowed in our law could we build this new institution, which leads us to consider that it is not provided for in our law.
- [24] CHYSSOULA Pentheroudakis, Justus A. BARON "Licensing Terms of Standard Essential Patents" JRC Science Hub <https://ec.europa.eu/jrc> 2017.
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- [28] We follow for this the work of Chryssoula Pentheroudakis, Justus A. Baron "Licensing Terms of Standard Essential Patents" JRC Science Hub <https://ec.europa.eu/jrc> 2017.
- [29] Also in relation to this is being discussed the granting of these licenses both in the framework of the final product and in the smallest scope of specific implements or complements that are those that need it, in relation to competitive behavior. Vid PADILLA J, KOREN W, "Portfolio Licensing to Makers of End-User Devices Downstream: Analyzing License refusals to FRAND-ASSURED Standard-Essential Patents at the Component Level" *T I Antitrust Bulletin*, Volume 62 (3), 2017. [https://awards.concurrences.com/IMG/pdf/padilla\\_and\\_wong-ervin.pdf](https://awards.concurrences.com/IMG/pdf/padilla_and_wong-ervin.pdf)
- [30] BARON A, "The appropriate royalty base for calculating reasonable royalty rates. An economist's perspective". Working paper, 2016
- [31] On this we must point out the recent change announced in the North American Agency on Equality of Arms and freedom of contracting (Assistant Attorney General Makan Delrahim), with important support from many sectors: <https://cpip.gmu.edu/wp-content/uploads/sites/31/2018/02/Letter-to-DOJ-Supporting-Evidence-Based-Approach-to-Antitrust-Enforcement-of-IP.pdf>