
**GUIDE TO LICENSING NEGOTIATIONS
INVOLVING
STANDARD ESSENTIAL PATENTS
(DRAFT)**

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I. Purpose of the Guide

A. SEP Issues and Background

(Changes in relation to standards and patents)

The Guide to Licensing Negotiations involving Standard Essential Patents (“this Guide”) aims to enhance transparency and predictability, facilitate negotiations between rights holders and implementers, and help prevent or quickly resolve disputes concerning the licensing of standard essential patents (“SEPs”) which are essential in implementing standards in the field of wireless communications and the like.

Patents granting monopoly to a technology as a reward for innovative effort and standards designed to spread that technology as widely as possible, in principle, are in conflict with each other, often giving rise to tension between them. That tension has escalated since the 1990’s when the telecommunications technologies started shifting to digital formats, accompanied by a trend toward standardizing the latest technologies while protecting them with patents at the same time. The result has been a growing number of SEP disputes.

Standards setting organizations (“SSOs”) have formulated SEP rules (“IPR policy”) designed to prevent disputes, promote the widespread use of the SEPs necessary for implementing technical standards, and ensure the appropriate recovery of investment in research and development related to SEPs. Part of this endeavor has included developing rules to ensure that SEP licenses are “fair, reasonable and non-discriminatory” (“FRAND”).

A considerable body of domestic and international legal precedents has begun to accumulate in relation to SEP disputes, and government agencies around the world are developing guidelines and other initiatives, with certain guiding principles beginning to emerge.¹ While there has been concern over the so-called “hold-up”

¹ The Japan Fair Trade Commission revised its Guidelines for the Use of Intellectual Property under the Antimonopoly Act in January 2016 to indicate behavior that could be considered as contravening the Antimonopoly Act in relation to SEPs issued on FRAND licensing terms. In November 2017, the European Commission announced the European Commission Communication on Standard Essential Patent (SEP) Licensing (below, European Communications), urging SSOs to increase SEP transparency and indicating general principles in relation to FRAND licensing terms for SEPs.

where businesses providing key social infrastructure or services using SEPs are faced with a threat of injunction, legal precedents across the world have come to show a converging trend where such injunctions are permitted only in limited situations. A body of legal cases relating to the concept of FRAND royalties has also started to grow.

(Paradigm shift in licensing negotiations)

The spread of Internet of Things (“IoT”) in recent years has spurred a fourth industrial revolution across the world whereby more and more infrastructure and devices are connected via the Internet, and this trend is transforming licensing negotiations for the SEPs required to implement technologies related to wireless communication among devices.

Because SEP licensing negotiations in the Information and Communication Technology (“ICT”) field traditionally took place chiefly among telecommunications companies, issues were commonly resolved through cross-licensing. Also, the established practice was for negotiations to remain ongoing as necessary after the start of a service. In addition, perspectives on license rates were consistent to some extent among the parties because it was easy for them to assess the scope, essentiality, and value of each other’s patents.

However, there are now cases, particularly in the United States, in which Patent Assertion Entities (“PAEs”) that are not engaged in business operations, but rather generate revenue solely by asserting patents, are also parties to SEP disputes.

Moreover, with the spread of IoT, companies from a whole spectrum of different industries have begun using ICT standards, and thus been brought to the negotiating table. For example, in addition to those telecommunications companies holding SEPs, negotiations may now involve end-product manufacturers such as automobile makers as well as service businesses which do not hold SEPs themselves but need to use them.

As the parties to licensing negotiations change, so do various aspects of those negotiations. As noted above, given the growing frequency of licensing negotiations between ICT companies and companies in other industries, it is becoming harder to resolve disputes through cross-licensing. In addition, perspectives on essentiality and licensing rates are becoming increasingly divergent, resulting in more serious SEP disputes. Shorter product life cycles and the growing number of patents per

product in recent years are increasing the need to resolve more complex disputes quickly and efficiently.

(Need for creating this Guide)

With companies from a broad spectrum of industries now finding themselves involved in SEP licensing negotiations, appropriate information needs to be provided to enable businesses not familiar with such negotiations to feel confident taking a seat at the negotiating table.

There is also the issue of a “hold-out”, where an implementer’s failure, after receiving an offer for licensing negotiations from the rights holder, to engage in negotiations in good faith in anticipation that an injunction will be denied on SEPs. There have been calls to have this issue addressed.

Further, there is a strong call for enhancing the transparency of SEPs. There are industry practices to determine royalties in proportion to the number of SEPs held covering a standard. Due to these practices, rights holders might sometimes declare patents as SEPs² even when such patents are still in the application phase as well as when they are not truly essential to the implementation of a standard. SSOs typically do not check whether the FRAND-declared patents are in fact essential, or whether changes made to technical specifications during the standard creation process have made a patent inessential. In addition, there is no routine third-party review process at the SEP listing stage.

Given this situation, the Japan Patent Office (“JPO”) has decided to identify those elements that should be considered to achieve a balance between the interests of rights holders and implementers with respect to negotiation procedures and methods of calculating royalty rates.

B. Nature of this Guide

The SEPs addressed in this Guide are those the current or original rights holder has presented to an SSO as an SEP to be licensed on FRAND terms. This Guide may also be relevant to non-FRAND SEPs as well as commercially essential

² The practice is for rights holders to present SSOs with standard-related patents and commit to licensing them out on FRAND terms.

patents (those that are not technically essential and could be avoided by using a substitute technology, but where the cost of such a change may be too high).

This Guide is not legally binding and does not forejudge future judicial rulings. It is intended to summarize issues concerning licensing negotiations based on the current state of court rulings, the judgment of competition authorities, licensing practices, etc. This Guide aims to offer an explanation of what actions companies can take to make it more likely to be recognized as “negotiating in good faith” so that the implementer can avoid an injunction and the rights holder can secure appropriate compensation. This Guide also discusses how to engage in such negotiations efficiently. This Guide is not intended to be prescriptive.

This Guide does not present “recipes” which can be used to automatically calculate the appropriate royalty rate – rather, it is meant to present factors to be considered when determining what a reasonable royalty is. In other words, a solution cannot mechanically be produced by simply following this Guide. Given the diversity of SEP licensing negotiations and of the circumstances in which the parties to such negotiations are placed, a solution has to be worked out in each particular case.

In drawing up this Guide, we have sought to remain as objective as possible in presenting court rulings and practices in relation to SEP licensing negotiations.

This Guide aims to serve a wide range of entities, including not only telecommunications companies around the world with experience in negotiating SEP licenses, but also enterprises just entering the telecommunications industry, companies outside the telecommunications industry that, given the spread of IoT, may now find themselves newly exposed to SEPs, and small and medium enterprises (“SMEs”) unaccustomed to SEP licensing negotiations.

This Guide provides the basic information to be considered before entering into negotiations. We hope that this Guide will serve as a useful starting point for productive negotiations.

In formulating this Guide, we invited the submission of proposals between September 29 and November 10, 2017, receiving around 50 responses from Japan and abroad. In addition, we engaged in discussions with representatives from industry, academia and law, who offered many valuable comments and insights. The content of this Guide owes much to these inputs.

With the environment surrounding SEP licensing negotiations continuing to transform, it will be vital that this Guide, too, continue to evolve and remain as a “living” one. We plan to review and revise this Guide as appropriate based on further accumulation of legal cases and the views of government agencies, companies, and professionals around the world.

II. Licensing Negotiation Methods

A. Good Faith

There are two meanings in FRAND: (1) the negotiation process itself and (2) the terms and conditions of a resulting license. While the purpose of licensing negotiations is to settle on appropriate license terms, the process of a negotiation also impacts whether an injunction is justified or not. Therefore, this chapter will address the first meaning of FRAND.

When patent rights are infringed, a rights holder, in principle, may exercise its right to seek an injunction. However, around the world, when implementers in good faith intend to obtain a license on FRAND terms, court decisions are consistent in imposing limitations on granting injunctive relief to owners of SEPs for which a FRAND declaration is made, *i.e.* FRAND-encumbered SEPs.³

In particular, the decision by the Court of Justice of the European Union (“CJEU”) in 2015 on a case between Huawei and ZTE⁴ has attracted wide attention. It provided a framework for good faith negotiations between rights holders and implementers by identifying actions which each of the parties should take at each stage of the licensing negotiations. This framework details the rules of negotiations from the perspective of the Competition Law in Europe and not every court decision in each country follows this framework. Nevertheless, the framework is generally considered to be a useful approach to encourage good faith negotiations whereby rights holders may fulfill their FRAND obligations and implementers may minimize their risk of an injunction and continue using standard technologies, regardless of the differences in the legal bases for stipulating the negotiation rules for FRAND-encumbered SEPs.

³ The rationale for restricting the right to seek injunctive relief by rights holders varies from country to country. (See II.A.5.)

⁴ *Huawei v. ZTE* (EU, CJEU, 2015)

This framework, however, does not provide specific details about negotiations, such as the scope of information that the parties should submit at each stage of the negotiation and the period given to make a response. Some point out that this has undermined predictability of licensing negotiations.

Under these circumstances, this Guide, based on the framework presented by the CJEU and informed by court decisions in various countries and actual practices in SEP disputes, has listed more specific issues relating to actions that parties may take at each stage of licensing negotiations. Once again, this Guide is not intended to be prescriptive.

[Steps of the Licensing Negotiation Process]

Step 1: Offer by Rights Holder of Licensing Negotiation

Step 2: Expression of Willingness by Implementer to Obtain a License

Step 3: Specific Offer by Rights Holder on FRAND Terms

Step 4: Specific Counteroffer by Implementer on FRAND Terms

Step 5: Rejection by Rights Holder of Counteroffer / Settlement of Disputes
in Courts or through ADR

1. Step 1: Offer by Rights Holder of Licensing Negotiation

(General Statement)

In general, if patent rights are suspected to be infringed by an implementer, the rights holder may initiate SEP negotiations by specifying the relevant patents and identifying the way those patents have been or are being infringed.^{5, 6}

Usually, the rights holder is required to prove the infringement by providing to the implementer, among other things⁷:

⁵ The framework in *Huawei v. ZTE* (EU, CJEU, 2015), identifies that first the rights holder alerts the alleged infringer of infringement by identifying the patents and specifying the way they have been infringed.

⁶ In the field of telecommunications, although implementers often start a negotiation only after receiving an invitation to license from a rights holder because the number of SEPs and the number of patentees is large, it may be useful for parties to refer to the framework of this Guide even if such negotiations are initiated by the implementer before it launches business operations.

⁷ Besides these, rights holders may demonstrate their good faith by, for example, presenting evaluations by third-party experts, examples from past cases, etc.

- (1) Documents identifying the SEPs (list of patent numbers⁸, names of the standards at issue, the geographical scope of patents, etc.)
- (2) Documentation mapping claims of the SEPs to the standards and/or products (claim charts⁹);
- (3) Other documents demonstrating the essentiality of the SEPs, such as declaration documents in which rights holders made FRAND declarations to SSOs¹⁰, etc.

(Claim Charts)

Claim charts are explanatory documents presented by rights holders, which demonstrate that their patents are essential for the use of the standards, and that the patented inventions have actually been put into practice. When patents are SEPs, such claim charts generally map each element of the patent claims to the corresponding features of the standards. Claim charts may be useful for implementers to analyze whether they are infringing the SEPs. Meanwhile, by presenting claim charts, the rights holders may demonstrate that they are providing information in good faith to implementers.

Also, in some cases, rights holders may provide claim charts mapping patent claims of SEPs to products manufactured by implementers, rather than just to the standards. When the details of these patent claims are contained within the scope of the standards documents themselves, and if the implementers advertise that their products conform to the applicable standards, the act of indicating the correspondence between patent claims and the standards themselves may be sufficient. Thus, mapping patent claims to actual products may not always be necessary.¹¹

⁸ In *NTT DoCoMo v. HTC* (Germany, district court, 2016), the court stated that it is necessary to at least indicate the patent number. In *Sisvel v. Haier* (Germany, high court, 2016), the court stated that it is an industry practice to present 10 to 15 representative patents as a “proud list.”

⁹ In *Sisvel v. Haier* (Germany, high court, 2016) and the *NTT DoCoMo v. HTC* (Germany, district court, 2016), the courts stated that it is necessary to present a claim chart.

¹⁰ In *NTT DoCoMo v. HTC* (Germany, district court, 2016), the court stated that rights holders need to inform the implementer that the patent is declared standard essential to an SSO.

¹¹ In *Fujitsu v. Netgear* (U.S., CAFC, 2010), the court stated that if an accused product operates in accordance with the standards, then comparing the claims to the standard is the same as comparing the claims to the accused product.

Some claim charts explain the connection between claim terminology and the corresponding features of the standards documents. In some cases, that explanation includes confidential information. In such situations, parties may conclude a confidentiality agreement (non-disclosure agreement) in licensing negotiations. (Refer to II.B.3.)

However, if a rights holder forces an implementer to enter into a confidentiality agreement as a condition to providing claim charts even when claim charts do not include confidential information, that may be viewed as acting in bad faith.

(Documents Demonstrating the Essentiality of SEPs)

Declaration documents, in which rights holders, based on their own analysis, made a FRAND declaration to SSOs, could serve both parties as a reference on SEP essentiality. These documents, however, are typically based on the rights holders' opinions and not necessarily an objective demonstration that a patent is truly standard essential.¹²

When a rights holder and an implementer cannot agree on the essentiality of a patent, they may obtain an analysis from an independent evaluator. In this connection, the JPO has a system in which a panel in the Trial and Appeal Department provides an advisory opinion and will, from April 2018, start offering a determination of the essentiality of a patented invention but with no legally binding force.

(Rights Holders' Actions that May Be Viewed as Bad Faith)

The following actions by a rights holder, for example, may be viewed as bad faith:

- (1) Demanding injunctive relief before or immediately after sending a warning letter to the implementer¹³;

¹² In general, SSOs do not determine the essentiality of SEPs. Instead, the SEPs are identified as essential by the rights holder's own declaration.

¹³ In *Realtek v. LSI* (U.S., federal district court, 2013), the court stated that seeking injunctive relief within 1 week after sending a warning letter to the implementer is a breach of the patent holder's contractual FRAND obligation.

- (2) Not sufficiently disclosing its documents identifying the SEPs, claim charts, or documents demonstrating the essentiality of the SEPs when offering licensing negotiations to an implementer; and
- (3) Claiming that they will not provide claim charts to the implementer unless they conclude a confidentiality agreement.

However, some courts have determined that a rights holder will not be viewed as acting in bad faith even if it does not provide detailed information on its patents to an implementer, when negotiating over a patent license once granted to the implementer but that has since expired.¹⁴

2. Step 2: Expression of Willingness by Implementer to Obtain a License

(General Statement)

When an implementer receives an offer from a rights holder for licensing negotiations, the implementer should not leave that offer unanswered but instead should respond to the offer in good faith, even if it recognizes problems with the offer.¹⁵

After receiving documents identifying the SEPs and including claim charts from the rights holder, if the implementer concludes that it needs to obtain a license for the SEPs, it may express its willingness to conclude a licensing agreement with, that is to obtain a license from, the rights holder.

There is an opinion that, when an implementer receives an offer from a rights holder for licensing negotiations, and even if discussions are still being conducted about essentiality, validity, and infringement, the implementer has to first promptly express its willingness to obtain a license, while reserving its rights to challenge these issues. In practice, however, the general approach is that parties will first conduct discussions about essentiality, validity, and infringement, and then the implementer will express its willingness to obtain a license.

¹⁴ *Unwired Planet v. Huawei* (UK, high court, 2017)

¹⁵ In *Huawei v. ZTE* (EU, CJEU, 2015), the court stated that the alleged infringer should diligently respond to the SEP holder's offer, in accordance with recognized commercial practices in the field and in good faith, this being a matter that must be established on the basis of objective factors and which implies, in particular, that there are no delaying tactics.

(Countermeasures by Implementers)

In practice, a rights holder and an implementer in licensing negotiations may not see eye-to-eye, and may fail to reach an agreement on essentiality, validity or infringement. In such cases, the implementer can express its willingness to obtain a license without waiving its rights to challenge these issues.^{16, 17}

An implementer may still challenge, for example, the following issues on patent rights for which it intends to obtain a license:

- (1) Whether the patents are truly SEPs;
- (2) Whether the implementer has infringed these patents;
- (3) Whether the patents are enforceable¹⁸;
- (4) Whether the entity who has exercised its rights is the true holder of the patents;
- (5) Whether the patents have been exhausted; and
- (6) Whether the patents are valid.

When implementers challenge the issues identified above, they may be required to provide specific grounds of such positions. For example, it is useful for them to provide, among other things:

- (1) Sufficient technical information about their products and services to allow rights holders to evaluate non-infringement defenses, *i.e.* the implementers' refutation that they do not infringe the subject patents; and
- (2) Prior art implementers believe serve as grounds for invalidating the patents.

¹⁶ In *Huawei v. ZTE* (EU, CJEU, 2015), the court stated that an implementer “cannot be criticized either for challenging, in parallel to the negotiations relating to the grant of licenses, the validity of those patents and/or the essential nature of those patents to the standard ... or for reserving the right to do so in the future” and the court did not cause implementers to waive their defenses, even while indicating their willingness to take a license.

¹⁷ In *Apple v. Samsung* (Japan, IP high court, 2015), although the implementer Apple insisted that its product did not infringe and argued that the patent was invalid, the court found Apple to be willing to obtain a license.

¹⁸ Under U.S. law, patents can be held unenforceable if the rights holder commits inequitable conduct before the United States Patent and Trademark Office by, for example, withholding material information with an intent to deceive. (*Therasense v. Becton* (U.S., CAFC, 2011)).

(Reasonable Amount of Time for Response)

When reference materials provided by rights holders to implementers are not sufficient, such as not identifying the SEPs or including claim charts, it is desirable that the implementers promptly request the rights holders to provide such materials.

The reasonable amount of time needed for the implementer to express its willingness to obtain a license after receiving such information may vary depending on various factors, such as the number of patents at issue, the complexity of the technology, the level of knowledge the implementer may have about the technology, any prior relationship, business transactions, and the state of a dispute on essentiality, validity, and infringement between the parties.

If there are relatively few patents at issue and the implementer is familiar with the technology, it may be reasonable for the implementer to express its willingness to obtain a license in a relatively short period of time.

On the other hand, if there are a significant number of patents at issue and the implementer is unfamiliar with the technology, several months may be a more reasonable time frame. For example, when a component in an implementer's product, supplied by a third party, is subject to a SEP, the implementer may need to obtain technical details about that component from the supplier and thus may need more time to respond. If the initial response takes time, it would be desirable for the implementer to notify the rights holder and explain the specific reasons for the delay in response.

(Implementers' Actions that May Be Viewed as Bad Faith)

The following actions, for example, by an implementer may be viewed as bad faith:

- (1) Not explaining any reason for a very late reply or refusing to negotiate at all¹⁹;
- (2) Claiming it will not start negotiation unless all grounds for essentiality and validity of the SEPs are first provided when the parties have not yet agreed

¹⁹ U.S. Dep't of Justice and U.S. Patent and Trademark Office, Policy Statement (2013); In *Apple v. Motorola* (U.S., CAFC, 2014), the court stated that an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect.

- whether to conduct licensing negotiations for an entire portfolio of patents;
- (3) Unreasonably delaying negotiations by, for example, persistently demanding the rights holder to provide information that cannot be disclosed due to confidentiality agreement(s) with others;
 - (4) Refusing to conclude a confidentiality agreement, while demanding the rights holders to provide claim charts, including detailed claim interpretations;
 - (5) Repeatedly making meaningless responses; and
 - (6) Refusing to obtain a license solely because there are others that have not obtained it.

Even when reference materials provided by the rights holder are insufficient, the implementer's failure to respond may be viewed as bad faith. In such a case, it would be desirable for the implementer to respond to the rights holder at least by, for example, requesting specific and necessary reference materials.

When discussions about essentiality, validity, and infringement of the SEPs are still ongoing, it may not necessarily be viewed as acting in bad faith if an implementer does not promptly express its willingness to obtain a license. On the other hand, some courts have ruled that, while reserving issues of essentiality, validity, and infringement of SEPs, implementers should promptly express their willingness to obtain a license.²⁰ Thus, from the perspective of minimizing the risk of injunction, it would be safer for an implementer to express its willingness to obtain a license at an early stage of the negotiations.

²⁰ In *St. Lawrence v. Vodafone and HTC* (Germany, district court, 2016), the court stated that 5 months is too long to express its willingness to obtain a license after the initial warning by the rights holder even taking into account that the implementer was a network operator and was to be allowed a certain period for consultation with the manufacturers of the challenged mobile phones. In *St. Lawrence v. Deutsche Telekom and HTC* (Germany, district court, 2015), the court stated that considering that the implementer was a mobile phone manufacturer, 3 months was too long to express its willingness to obtain a license after the filing of an infringement lawsuit.

3. Step 3: Specific Offer by Rights Holder of FRAND Terms

(General Statement)

If an implementer has expressed its willingness to obtain a license, the rights holder may promptly present to the implementer a written offer for a license on FRAND terms. In addition to indicating its royalty calculation method (refer to III.), the rights holder should specifically explain why the offer is on FRAND terms. This is done for an implementer to appropriately determine whether the presented terms and conditions are reasonable and non-discriminatory.²¹

Such specific grounds may include²²:

- (1) Explanation of how the rights holder calculates royalties²³ (The rights holder should explain its calculation sufficiently for the implementer to objectively understand that the terms and conditions presented satisfy the FRAND obligation.²⁴)
- (2) A list of comparable licenses and their terms and conditions, if any²⁵, (which may be disclosed depending on confidentiality requirements). (Refer to II.B.3. and III.A.3.a.)

(Rights Holders' Actions that May Be Viewed as Bad Faith)

The following actions by a rights holders, for example, may be viewed as bad faith:

²¹ In *Philips v. Archos* (Germany, district court, 2016), since the royalty calculation method was not included in the FRAND offer, the right to seek injunctive relief was not upheld.

²² For example, rights holders may also be able to present prices of products or components that are used as the basis of the royalty calculation, the ownership ratio of the rights holders relative to the total number of SEPs related to the standard, and the date of expiration of patents.

²³ In *Sisvel v. Haier* (Germany, high court, 2016), the court stated that the rights holder needed to show the factors that formed the basis of its royalty calculation.

²⁴ In *NTT DoCoMo v. HTC* (Germany, district court, 2016), the court stated that the rights holder needed to make it possible for the implementer to understand that the offer satisfied FRAND terms based on objective criteria.

²⁵ In *Sisvel v. Haier* (Germany, high court, 2016), the court stated that if there is a license program of the same quality and scope as the portfolio, it is necessary to make a comparison with that program.

- (1) Seeking an injunction against an implementer who has expressed its willingness to obtain a license before offering a license on FRAND terms, for the purpose of gaining leverage in the licensing negotiations^{26, 27};
- (2) Sending warning letters (cease-and-desist letters) to business partners of an implementer despite ongoing negotiations²⁸;
- (3) Presenting an initial offer that is unreasonable on its face²⁹; and
- (4) Not explaining how the royalty is calculated or not demonstrating that the license offer is on FRAND terms.

4. Step 4: Specific Counteroffer by Implementer on FRAND Terms

(General Statement)

If an implementer disagrees with the proposed FRAND terms presented by a rights holder, the implementer may provide a FRAND counteroffer. When presenting such a counteroffer, in addition to indicating the royalty calculation method (refer to III.), the implementer should indicate specific grounds demonstrating that its counteroffer is on FRAND terms.

Such specific grounds may include:

- (1) Explaining how the royalty presented by the implementer is calculated; and

²⁶ In *Realtek v. LSI* (U.S., federal district court, 2013), the court stated that seeking injunctive relief before offering a license on FRAND terms is a breach of contractual obligations.

²⁷ In *Microsoft v. Motorola* (U.S., court of appeals for the ninth circuit, 2012), the court stated that seeking injunctive relief in a related case in Germany before the decision of the U.S. court is a “vexation or oppressive”.

²⁸ In *Imation v. One-Blue* (Japan, district court, 2015), the court stated that it is an abuse of rights and falls under unfair competition to notify a customer of the implementer who expresses its willingness to obtain a license under the FRAND terms that the rights holder has a right to seek an injunctive relief.

²⁹ In *Microsoft v. Motorola* (U.S., federal district court, 2012), the court stated that since a FRAND declaration anticipates that the parties will negotiate toward a FRAND license, it logically does not follow that the initial offers must be on FRAND terms but must comport with the implied duty of good faith and fair dealing inherent in every contract. In *Unwired Planet v. Huawei* (UK, high court, 2017), the court stated that offers in a negotiation that involve rates higher or lower than the FRAND rate, but do not disrupt or prejudice the negotiation, are legitimate.

- (2) Providing a list of comparable licenses and their terms and conditions, if any, (including royalties paid to, or received from, other companies for equivalent technologies, royalties by patent pool, etc.)

(Reasonable Amount of Time for Response)

The reasonable time period from when an implementer receives an offer on FRAND terms from a rights holder until the implementer presents a counteroffer is determined on a case by case basis. When the technologies of the SEPs are not complicated, the implementer may present its counteroffer in a relatively short period of time. When technological complexity or other issues require a certain amount of work to prepare a response, it may be deemed reasonable for an implementer to respond in several months.

Factors that may determine what constitutes a reasonable amount of time to provide a counteroffer include: the number of patents at issue, the complexity of the technology, the number and type of products at issue, whether any comparable royalty rate exists, and whether the parties are negotiating a worldwide license or regional license.

(Implementers' Actions that May Be Viewed as Bad Faith)

The following actions by an implementer, for example, may be viewed as bad faith:

- (1) Not providing any counteroffer on FRAND terms after a rights holder has presented specific grounds showing that its proposed licensing terms and conditions are FRAND³⁰; and
- (2) Not explaining how a proposed royalty is calculated or not demonstrating that the counteroffer is on FRAND terms.

An implementer who does not provide a counteroffer on FRAND terms may not immediately be viewed as being in bad faith when further discussions are needed to determine the technical relationship between the subject patents and the standards as well as the validity of the patents, or when a rights holder does not provide any specific offer on FRAND terms. Nonetheless, from the perspective of minimizing

³⁰ In *Apple v. Motorola* (U.S., CAFC, 2014), the court stated that an injunction may be justified when an implementer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect.

the risk of an injunction, it would be safer for an implementer to promptly urge the rights holder to present specific FRAND terms.³¹

5. Step 5: Rejection by Right Holders of Counteroffer / Settlement of Disputes in Courts or through ADR

(General Statement)

If a rights holder rejects a counteroffer from the implementer and the parties fail to reach an agreement in negotiation, the parties may address their dispute in court.³²

As an alternative to litigation, the parties may agree to settle their disputes through Alternative Dispute Resolution (ADR), such as mediation or arbitration.

(Advantages of ADR)

Since it may be unrealistic for a court to determine the essentiality, validity, and infringement of dozens, or potentially even hundreds, of SEPs, a rights holder may choose several of its important patent rights to bring to court. On the other hand, mediations and arbitrations are able to settle disputes over many patents all at once. Therefore, in order to promptly settle SEP disputes involving many patents, the use of ADR, such as mediation and arbitration, may be useful.

Unless used as a tool to intentionally delay negotiations or increase cost, ADR may be a more prompt and more cost-effective approach, compared to a lawsuit.³³ In addition, parties have more flexibility in setting their own rules and procedures. As an example, parties can agree that arbitrators will make decisions only on

³¹ In *NTT DoCoMo v. HTC* (Germany, district court, 2016), the court granted injunctive relief where the implementer did not respond or make a counteroffer for 1.5 years after receiving the FRAND offer and half a year after the filing of the court action.

³² In *Realtek v. LSI* (U.S., federal district court, 2013), the court stated that if a putative implementer refuses to pay what has been determined to be a FRAND royalty, or refuses to engage in a negotiation to determine FRAND terms, an injunction could be appropriate.

³³ Although forms of ADR, such as arbitration, may not be quicker and more cost effective than litigation in every case, there is a broad consensus that arbitration generally has numerous benefits over litigation with respect to efficiency. (Benefits of Arbitration for Commercial Disputes, American Bar Association)

royalties for SEPs on FRAND terms, without considering the essentiality and validity of the SEPs.³⁴

In particular, an international arbitration process can be used to reach a single settlement globally as arbitral awards overseas are recognized and enforced abiding by the New York Convention.

Proposing or accepting to use ADR can be considered a factor showing good faith in negotiations. Refusing ADR options may not, however, indicate bad faith.

(Security Offered by Implementers)

Under the framework presented in the CJEU decision on the case between *Huawei v. ZTE*, the Court ruled that, when an alleged infringer has used SEPs before concluding any licensing agreements, and if its counteroffer is refused, the alleged infringer is required to provide appropriate security, in accordance with recognized commercial practices in the field, for example by providing a bank guarantee or by placing the necessary amounts on deposit. Also, it was stated that “[t]he calculation of that security must include, inter alia, the number of the past act of use of the SEP, and the alleged infringer must be able to render an account in respect of those acts of use.”

Although providing such security may be a factor in considering good faith, this is not necessarily a general business practice in regions other than Europe, such as Japan and the United States, where an implementer’s failure to offer security may not necessarily be viewed as bad faith.

(Exercise of Rights to Seek Injunctions)

Around the world, there has been an accumulation of legal precedents concerning SEP-related injunctions. In these cases, limitations are consistently imposed on the exercise of the right to seek an injunction against implementers who have responded in good faith. On the other hand, when implementers have responded in bad faith during the negotiation process, most courts have determined that it would be appropriate for a rights holder to be allowed to exercise its right to seek an injunction.

³⁴ There are many ways parties can structure ADR, including that a neutral (or panel of neutrals) can decide certain discrete issues or make non-binding recommendations as to those issues.

Nonetheless, grounds for restricting the rights of SEP owners to seek injunctions vary by country. For example, there are cases in which the exercise of the right to seek an injunction was restricted based on: in the United States, the contractual effects of FRAND declarations to SSOs on third parties and the requirements for an seeking injunction, as detailed in the decision by the Supreme Court in the *eBay* case³⁵; in the U.K., the contractual effects of FRAND declarations to SSOs on third parties and the principle of proportionality³⁶; in Europe, a violation of the Competition Law by the rights holder's abuse of its dominant position³⁷; and in Japan, the rights holder's abuse of patent rights.³⁸

Also, competition authorities around the world suggest that demanding an injunction against an entity that is willing to obtain a license on FRAND terms may be a violation of Competition Law.³⁹

³⁵ In the United States, in general, an injunction (35 U.S.C. 283) takes into account the four requirements identified in *eBay v. MercExchange* (U.S., Supreme Court, 2006). A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. Regarding SEPs, in *Microsoft v. Motorola* (U.S., federal district court, 2013) and *Apple v. Motorola* (U.S., CAFC, 2014), the courts did not grant an injunctive relief since the court regarded FRAND commitments to the SSO as a contract between rights holder and the SSO (a third-party beneficiary), and stated that the rights holder did not satisfy one of the factors in *eBay* (U.S., Supreme Court, 2006), "it has suffered an irreparable injury", because the rights holder could obtain relief by the royalty paid by the implementer.

³⁶ In the U.K., it is generally understood that an injunction (section 61 of the U.K. Patent Act 1977) is a discretionary matter for the court. In *Unwired Planet v. Huawei* (U.K., high court, 2017), the court stated that the effect of the FRAND declaration to an SSO will extend to third parties and it is "disproportionate" not to grant Unwired Planet an injunction.

³⁷ In *Huawei v. ZTE* (EU, CJEU, 2015), the court identified the steps that the rights holder must take before seeking injunctive relief, such as alerting the implementer or presenting a specific, written offer for a license on FRAND terms. The court held that if the implementer improperly delays after these steps are taken by the rights holder, an injunction will not violate competition law and seeking injunctive relief will be justified.

³⁸ In Japan, there is no provision that limits an injunction (Japanese Patent Law Article 100) in general in the patent law, but regarding SEPs, in *Apple v. Samsung* (JP, IP high court, 2014), seeking injunctive relief against a person who is willing to obtain a license was deemed to be an abuse of rights.

³⁹ See, for example, *Google v. Motorola* (U.S., FTC, 2013); *Motorola v. Apple* (EU, EC, 2014); *Samsung v. Apple* (EU, EC, 2014); *Huawei v. ZTE* (EU, CJEU, 2015); "Guidelines for the

B. Efficiency

To conduct licensing negotiations smoothly, it is also important to consider efficiency along with good faith. The following sections address key points that should be considered so that negotiations under FRAND conditions are conducted efficiently.

[Factors for efficient negotiation]

1. Notification of a Timeframe
2. Parties to Negotiation in Supply Chain
3. Protecting Confidential Information
4. Choice of Patents subject to Negotiation
5. Geographic Scope of License Agreement
6. Patent Pool Licensing
7. Greater Transparency of SEPs

1. Notification of a Timeframe

For negotiations to proceed smoothly, it is desirable for the parties to notify each other of the overall expected timeframe required for each of the stages identified in II.A above.

The negotiation timeframe may vary widely. Factors that may be considered in setting reasonable expectations for a timeframe may include, but are not limited to: the number of patents at issue, the complexity of the technology, the number of different products and types of products at issue, the type and nature of the products, whether third-party suppliers need to be involved in the discussions, matters pending in the courts or patent offices that relate to issues underlying the negotiation (e.g., essentiality and validity), and the number of licenses the patent owner has already granted for the SEPs.

Naturally, as discussions proceed, there may be events that require the timeframe to be changed. Nonetheless, discussing and clarifying the expected timeframe early on can allow both parties to move forward expeditiously.

Use of Intellectual Property under the Antimonopoly Act” (The Japan Fair Trade Commission, 2016).

In addition, with product lifecycles becoming shorter, prolonged negotiations may render technologies obsolete and result in patent owners being unable to recover their development investment. Accordingly, notifying the estimated length of time for licensing negotiations in view of the product lifecycle may show good faith.

2. Parties to Negotiation in Supply Chain

(General statement)

With the spread of IoT, the use of standards has become more common. One issue often arising during negotiations is which entities in the manufacturing supply chain should be parties to negotiations for concluding the licensing agreement or should participate in the licensing negotiations (e.g., component suppliers versus end-product manufacturers). There may not be a problem in selecting the parties to a negotiation as long as the parties can agree based on industry practices. However, problems may arise if, for example, a component installed in the end-product implements a SEP. For example, in the telecommunications field, it may be possible for a mobile network operator (“MNO”) that provides communications services to be the party that signs a license agreement or engages in licensing negotiations.

To make license management easier, rights holders generally tend to want to conclude license agreements with the end-product manufacturer (In the telecommunications field, this will be the MNO. Same goes for below). On the other hand, the end-product manufacturer tends to want the supplier that has the most technical knowledge on the subject component to be the party in negotiating and concluding the licensing agreement. This tendency is especially evident in industries where there is a general practice for a supplier to conclude the patent indemnification agreement and to pay licensing fees.

(Implementer who will be the party to licensing negotiations)

In general, the rights holder is in the position to decide with which party in the supply chain it signs an agreement, e.g., end-product manufacturer, component manufacturer, or sub-component manufacturer.

Meanwhile, there is an international debate on whether FRAND-encumbered SEPs should be licensed to anyone who desires to obtain such a license.^{40, 41}

There are some end-product manufacturers that consider it discriminatory and contrary to FRAND commitments if the rights holder refuses to negotiate with the supplier manufacturing the component when it requests to be the party to the licensing negotiations. On the other hand, some consider it inappropriate for the end-product manufacturer to refuse all negotiations when the rights holder requests it to be the party to the licensing negotiations.

In addition, some argue that if the essential part of the patented invention is used only in the components provided by the supplier, it is appropriate for the supplier to be the party to the licensing negotiations. Others argue that if the essential part of the patented invention contributes to the end product, it is appropriate for the end-product manufacturer to be the party in licensing negotiations.

In any case, it should be noted that there is a risk that injunctive relief may be granted against entities regardless of whether they are suppliers or end-product manufacturers, if no entity in the supply chain obtains the license.

(Arguments from the standpoint of efficiency)

Some argue that having the end-product manufacturer involved in negotiations is most efficient, in that the licensing negotiations can then cover all the components contained in a product and consequently minimize the number of necessary negotiations as well as reduce negotiation costs, while also avoiding issues such as discrepancies in the licensing conditions between suppliers.

Also, it is generally considered that when a good that is protected by a patent is placed appropriately on the market by a rights holder or a licensed implementer, the patent is exhausted, so the rights holder may not exercise its rights against someone who has purchased the good.⁴² Therefore, if a rights holder concludes

⁴⁰ The idea that rights holders must license all entities wishing to obtain licenses regardless of the level in the supply chain is commonly referred as “license to all”. On the other hand, the idea that the FRAND declaration is not a requirement for licensing to all parties using standard technology, but is rather a mechanism to ensure that those who want to use standard technology can access that technology is commonly referred as “access for all”.

⁴¹ In 2015, the Institute of Electrical and Electronics Engineers (IEEE) amended its patent policy to state that rights holders should be willing to make licenses available to anyone who requests a license. Objections to this amendment have been made by rights holders. (IEEE-SA Standards Board Bylaws (2015))

⁴² For example, when a component manufacturer has a license to the patents at issue and the product incorporating the component sold to the end-product manufacturers is manufactured

licensing agreements with multiple suppliers within a single supply chain, it becomes unclear which right has been exhausted, and could more readily lead to the issue of redundant earnings by the rights holder. There is a view that such issues may be avoided by conducting licensing negotiations with the end-product manufacturer.

On the other hand, there are opinions that if suppliers have more technical knowledge than an end-product manufacturer, it may be more efficient for such suppliers to be party to licensing negotiations. There are also opinions that there may be cases in which having the suppliers included in the negotiations may be more efficient, such as when a small number of suppliers are supplying components to a large number of end-product manufacturers, and the rights holders can minimize the number of negotiations by conducting licensing negotiations with such suppliers.

(Participants to support the negotiations)

There are opinions that even in cases in which the end-product manufacturer becomes the party in the licensing negotiations, involving entities with detailed technical knowledge in the negotiations can boost efficiency. For example, when the end-product manufacturer is only buying and using a component and does not have detailed knowledge of the technologies related to that component, it is likely to be more efficient to involve the component supplier, who is well-acquainted with those technical details, to support the negotiations. In such cases, it would be considered desirable to involve such entities in the licensing negotiations, regardless of whether or not it is going to be the party in the negotiations.

(Sharing the burden of licensing fees)

When the rights holder requests payment of licensing fees after the product is sold, it often becomes an issue of how this payment burden should be distributed within the supply chain. In particular, in the telecommunications industry, this issue tends to occur because entities commonly start licensing negotiations after the service is launched. There are certain industries in which a patent indemnification agreement may be concluded whereby the supplier shoulders the payment of

or sold, regarding patents practically implemented in that component, it may be impossible to request a royalty from an end-product manufacturer because the patent is exhausted at the first sale of the component (*Quanta v. LG* (U.S., Supreme Court, 2008)). On the other hand, in *Apple v. Samsung* (JP, IP high court, 2015), the court stated that when rights holders sell components used only for the manufacture of a patented product, the patent is exhausted while when a third party does not have an implied license and is manufacturing the end product using that component, the patent is not be exhausted.

licensing fees. Even when the license fee negotiated by the end-product manufacturer as the party is excessive, disproportionate to the sales price of the component, the supplier may be requested to bear the burden. To avoid such a situation, some patent indemnification agreements exempt SEPs.

There are also opinions that it may be reasonable to incorporate in a patent indemnification agreement a provision to exempt the supplier from responsibility to pay the licensing fee if the supplier was not given the chance to be involved in the licensing negotiations.

3. Protecting Confidential Information

(General statement)

A confidentiality agreement (non-disclosure agreement) ensures that information sensitive from a business or technical perspective that are disclosed during negotiations are not disclosed in turn to a third party. By concluding a confidentiality agreement, the parties may find it easier to disclose sensitive information, thus leading to a more efficient licensing negotiation.

On the other hand, care should be taken of the wording of a confidentiality agreement to avoid the risk of being prevented from presenting information in court later as proof of good faith negotiations.

(Confidential information of the implementers)

Confidential information of an implementer might include business-related information (e.g. market forecasts and sales information, etc.), technical information about the implementer's products not publicly available.

If the patents are directed to things not open to the public (such as blueprints of semiconductors or software source code) or methods of manufacture, an implementer may need to disclose proprietary technical information for both parties to reach an understanding of whether the product practices the patents.

By contrast, if the patents are directed to, for example, general-purpose mechanical inventions, it may be more apparent from inspection of the product whether it practices the patent(s) and the disclosure of confidential technical information by the implementer may not be required.

When the subjects of discussion are centered on the correspondence between patent claims and the standard documents, it is likely that the implementer does not need to disclose confidential technical information regarding the product.

(Confidential information of rights holders)

Confidential information of a rights holder might include an explanation of claim terminology and the corresponding sections in the standard documents, and the terms of comparable license such as the rate or the amount that are used to explain and support a FRAND offer.

(Provisions for a confidentiality agreement)

When concluding a confidentiality agreement, the following provisions (but not limited to) may be discussed depending on the circumstances of each negotiation:

- (1) Which information needs to be kept confidential
- (2) Who will receive confidential information?
- (3) How will confidential information be marked?
- (4) Whether orally communicated information will be covered?
- (5) The duration of the agreement
- (6) Whether information can later be used in litigation

(Maintaining confidentiality of the result of the licensing negotiations)

The parties may also consider setting forth confidentiality provisions applicable to the result of the licensing negotiations. On the one hand, parties are often interested in complete confidentiality such that even the existence of a resulting license agreement is confidential. On the other hand, oftentimes the existence and the content of the licensing agreement is not treated as confidential so that the agreement may be assessed as a “comparable license” in the future. The parties may want to consider, in view of the above, for example, whether all terms and the existence of an agreement will be confidential, whether all of its financial terms will be confidential, or whether only sales volume information (i.e., past sales) will be confidential, etc.

4. Choice of Patents Subject to Negotiation

Portfolio negotiations have become standard practice in actual licensing negotiations involving SEPs as comprehensive settlements are preferable from an efficiency standpoint.

When rights holders possess a large number of SEPs, however, the parties may discuss limiting the subject of the negotiation to “representative” patents so as

to streamline the negotiation process. When doing so, it may be desirable for the parties to explain the reason for selecting the patents as “representative”.

As an example, in a case involving several hundred SEPs, the parties used a method whereby they held discussions on 10 to 15 “representative” patents that were deemed as most valuable⁴³, and randomly selected samples to efficiently assess the total value.

The parties may also want to discuss whether the negotiations will include non-SEP patents in addition to SEPs.⁴⁴ For example, it may be efficient to include in the negotiation a patent for which there exists a technical alternative but practically inescapable due to cost/performance issues (commercially essential patent).⁴⁵

5. Geographic Scope of Licensing Agreement⁴⁶

With regard to the geographic scope of a license, parties should address whether they will be considering a license that will be limited to particular regions or a license that will be globally applicable. When setting the geographic scope, the parties should consider whether the implementer is operating or selling products in multiple regions throughout the world, and if the rights holder has patent rights in those jurisdictions.

Some argue that, given the international distribution of ICT and other standardized technologies, it would be more efficient to address SEPs in all countries and regions in which an implementer may produce and/or sell its products in future

⁴³ In *Sisvel v. Haier* (Germany, high court, 2016), the court asked the rights holder to present a “proud list” of 10-15 patents from a portfolio of over 400 patents and to explain the reason for choosing them.

⁴⁴ In licensing negotiations, when rights holders seek to cover non-SEPs in addition to SEPs, it is necessary to keep in mind that it does not conflict with “tying” of competition law.

⁴⁵ Certain SSOs explicitly rule out the concept of commercial essentiality in their IPR policies, defining essentiality solely on a technical basis (patents covering a technology must be a technical or engineering matter).

⁴⁶ There are various discussions about courts setting a licensing terms globally. In *Unwired Planet v. Huawei* (U.K., high court, 2017), although Huawei, the implementer, refused for the court to set the global licensing terms, it set the licensing terms globally. Meanwhile, in *TCL v. Ericsson* (U.S., federal district court, 2017), it set the licensing terms globally, because of the fact that the TCL, the implementer, had already agreed for the court to set global licensing terms.

in addition to countries and regions it currently does so.⁴⁷ Others argue that an implementer that is operating or has a concrete plan to operate in certain countries or regions may well conclude a licensing agreement covering only those countries or regions.

Also, it may be possible to conclude a global license, but with the licensing conditions being different by regions.⁴⁸

If the implementer is conducting business and/or sales in multiple regions, it is possible that the implementer may request a license agreement for patent rights only in such specific countries/regions, considering the specific circumstances of the patents in each country/region. In such cases, care should be taken to prevent this from turning into a delaying tactic in the negotiations.

6. Patent Pool Licensing

Patent pools are frameworks enabling patents held by multiple rights holders to be efficiently licensed in a single transaction. Wide participation by rights holders and implementers may boost the efficiency of licensing negotiations.

The licensing terms for pooled patents are disclosed in most cases. Such terms may thus be looked at for comparison when negotiating on other licenses.

Additionally, patent rights that are registered in a pool are often checked to some extent for essentiality by a third party. Although this does not necessarily guarantee essentiality, it may lead to greater transparency of the SEPs.

On the other hand, some point out that patent pools do not necessarily improve efficiency if rights holders who grant licenses individually participate in the patent pool as this may cause redundant royalty earnings on the part of such rights holders. There are also opinions that, patent pools do not necessarily improve the efficiency of licensing negotiations for implementers aiming to resolve disputes through cross licensing because pool management organizations are not practicing entities.

⁴⁷ In *Unwired Planet v. Huawei* (U.K., high court, 2017), the court found it reasonable to address SEPs in all countries and regions in which the implementers currently produce and/or sell and/or may do so in future.

⁴⁸ In *Unwired Planet v. Huawei* (UK, high court, 2017), the court found that licenses under the FRAND terms are global, while taking regional differences into consideration, it showed different royalty rates among different markets. In *TCL v. Ericsson* (U.S., federal district court, 2017), the court divided regions as the United States, Europe and rest of the World and set the royalty rates globally.

7. Greater Transparency of SEPs

Enhancing transparency of essentiality and validity of SEPs leads to more efficient licensing negotiations. SSOs are expected to promote the development of a database with information on SEPs.⁴⁹ It is also expected that rights holders will provide information on SEPs to SSOs as needed, so SSOs can then update its information.

With SSOs building up databases and widely providing information on SEPs, it will become easier for the rights holders to obtain the necessary documents when presenting their offer for licensing negotiations or FRAND licensing terms. It will also become easier for implementers to obtain information on SEPs related to relevant standards.

III. Royalty Calculation Methods

As mentioned earlier, there are two meanings in FRAND: (i) negotiation process and (ii) terms and conditions of a license. This chapter will address the second meaning of FRAND.

Since there is no established criteria for reasonable and non-discriminatory royalties, on the parties often come into intense conflict about the appropriate FRAND terms in SEP licensing negotiations

Therefore, this chapter will explain the royalty calculation method in detail, based on standard practices and the framework indicated by past court rulings. It should be noted, however, that this Guide summarizes the issues to be considered in relation to the calculation method and does not direct a way for obtaining a specific rate or amount of royalty.

A. Reasonable Royalties

1. Basic Approach

Royalties reflect the value that the patent has contributed to the product and therefore is generally obtained by:

(1) Royalty base (Calculation base) x (2) Royalty ratio (Rate)

⁴⁹ European Communications urges SSOs to improve the quality of their SEP database in order to enhance transparency on SEPs and refers to launching a pilot project on standard essentiality of SEPs.

This approach is also applied to the calculation of SEP royalties. There have been intense discussions, however, on the calculation method such as how to handle the value added after the patent was incorporated into a standard, how to identify the calculation base, and how to calculate the royalty rate, for which there are various approaches as shown below.⁵⁰

(Value added after the patent was incorporated into a standard)

There is a view that SEP royalties should only reflect the value before the standard is widely adopted in the market (generally called “ex ante”). This is based on the notion that, when a technology is being considered to be chosen as the standard, it is selected from multiple options of technologies, while, once it is incorporated into the standard, it is used only out of necessity to adhere to the standard.⁵¹

Based on this standpoint, there is a view that it is desirable for the royalty to be decided before the standard is widely used, and promptly setting the royalty after the standard is announced will enable implementers to more appropriately reflect the royalty on the price of a product.

On the other hand, there is a view that the “ex ante” approach is not practical in calculating the damages for infringement of patent rights because such damage amount should incorporate the value of the patented invention at the time of implementation and a part of such value is created by the patent successfully becoming the standard. Furthermore, there is also a view that it is inappropriate to adopt the “ex ante” approach, because if that approach is adopted, the profit from the standardization will only be distributed to the implementers and not to the rights holders.⁵²

⁵⁰ U.S. courts often apply the fifteen Georgia-Pacific factors (referred to as “GPF”) for calculating the royalty. With FRAND-encumbered SEPs, modified GPFs have been adopted. (*Microsoft v. Motorola* (U.S., federal district court, 2013))

⁵¹ See *Ericsson v. D-Link* (U.S., CAFC, 2014).

⁵² In *Unwired Planet v. Huawei* (UK, high court, 2017), the court stated that the rights holder could appropriate some of the value that is associated with the inclusion of his technology into the standard and the value of the products that are using those standards.

2. Royalty Base (Calculation Base)

(Identification of the Problem)

As for the calculation base, debate has centered on whether the smallest salable patent practicing unit (“SSPPU”)⁵³ or the entire market value (“EMV”)^{54, 55}

The SSPPU approach is based on the notion that if the SEP technology is used only in the component that is the SSPPU, the price of that component, which the SEP is considered contributing to, will then be the calculation base. Meanwhile, the EMV is an approach taken when the SEP technology is considered contributing to the function of the whole end product and driving demand for the product, and the price of the whole end product will be the calculation base.

There are many cases in which the rights holder has insisted on the adoption of the EMV approach based on its view that the SEP technology contributes to the function of the whole end product and drives demand of consumers to buy the product. Likewise, there are many cases in which the end-product manufacturer insists on the adoption of SSPPU approach based on its view that the contributions of the SEP technology is restricted to just a portion or component of the overall product.

In a situation in which, for example, communications technology is the core part of the product’s function, for instance in a cell phone, there was not much objection to the application of the EMV. With the emergence of products such as smart phones and self-driving cars for which such communications technology accounts only for a part of the product’s functions, the debate on the SSPPU or EMV intensified.

⁵³ In *In re Innovatio* (U.S., federal district court, 2013), the court stated that the Top Down approach starts with the average price of a Wi-Fi chip.

⁵⁴ In *CSIRO v. Cisco* (U.S., CAFC, 2015), the court stated that if a party can prove that the patented invention drives demand for the accused end product, it can rely on the end product’s entire market value as the royalty base.

⁵⁵ In *LaserDynamics v. Quanta* (U.S., CAFC, 2012), the court stated that it is generally required that royalties be based on the SSPPU, but if it can be shown that the patented feature drives the demand for an entire multi-component product, the rights holders may be awarded damages as a percentage of revenues or profits attributable to the entire product.

(Approach to the Calculation Base)

The SSPPU and the EMV, in fact, have in common the attempt to identify the calculation base according to where the contribution of the essential part of the SEP lies.⁵⁶

In addition, the SSPPU and the EMV are not the only base. The point is that a calculation base suitable for each individual case should be adopted.

For example, when the essential part of the SEP technology is supporting the operation of functions of a device larger than a chip and is contributing to the functions of the device beyond the chip itself, using the price of the chip as the calculation base may not reflect the real value provided by that SEP technology.

On the other hand, when the contribution by the SEP technology is restricted to the chip itself and the chip is independent and has an objective market value, the price of the chip may be deemed appropriate as the calculation base.

Even when the SEP technology goes beyond a particular chip, there are views that the SSPPU is effective as a starting point of discussions in accumulatively and elaborately analyzing to which portions of the product the SEP technology contributes.

Contrarily, there is an approach that uses the EMV as the starting point of discussion and figuring out the calculation base by multiplying the ratio at which the standard is contributing to the end product.⁵⁷

There is a view that the EMV approach makes the calculation base high leading to a tendency for the resulting royalty also to be high. However, some argue that when the calculation base is low, the rate will be high, while a high calculation base causes the rate to be low, making the selection of the calculation base not directly relevant to the resulting royalty amount in theory.

⁵⁶ In *Ericsson v. D-Link* (U.S., CAFC, 2014), the court stated that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.

⁵⁷ In *Apple v. Samsung* (Japan, IP high court, 2015), because the design, use interface, camera, audio function, etc. contribute to the product in addition to the wireless communication function, the court stated that the basis of the calculation should be multiplied by the rate that it is deemed was contributing to the product by complying with the standard (contribution rate).

3. Royalty Rate (Rate)

(Approaches to Determining the Rate)

There are many approaches to determining an appropriate rate. Approaches frequently used in court decisions are (i) an approach that refers to an existing comparable license (Bottom Up approach) and (ii) an approach that calculates the ratio of contribution of all SEPs for a given standard in the calculation base and then allots the ratio to individual SEPs (Top Down approach).

In practice, if there is an existing comparable license, referring to that comparable rate seems straightforward.⁵⁸

These two approaches are not contradictory. It may be possible to calculate the rate by both approaches and ensure a more reliable rate by comparing the results.⁵⁹

a. When Comparable Licenses Exist

Examples of comparable licenses include patents owned by the same rights holder and patents owned by others essential to the same standard or a different standard.

In court rulings, the following factors, for example, have been considered in determining whether a license is comparable:

- (1) Whether the license is for the same or similar patents,
- (2) Whether the license includes unrelated technology or other products⁶⁰,
- (3) Whether the license has a similar fee structure (e.g., lump-sum or running royalty)

⁵⁸ In *Laser Dynamics v. Quanta* (U.S., CAFC 2012), the court stated that actual licenses to the patented technology are highly probative as to what constitutes a reasonable royalty for those patent rights because such actual licenses most clearly reflect the economic value of the patented technology in the marketplace.

⁵⁹ In *Unwired Planet v. Huawei* case (UK, high court, 2017), while adopting a Bottom Up approach, the court double-checked whether royalty stacking has occurred with a Top Down approach. On the other hand, in *TCL v. Ericsson* case (U.S., federal district court, 2017).), while adopting a Top Down approach, the court double-checked with a Bottom Up approach.

⁶⁰ In *ResQNet v. Lansa* (U.S., CAFC, 2010), the court stated that the trial court should not rely on unrelated licenses to increase the reasonable royalty rate above rates more clearly linked to the economic demand for the claimed technology.

- (4) Whether the nature of the license is the same in terms of exclusivity⁶¹
- (5) Whether the license applies to similar regions (e.g., regional or global license)

(a) Comparable licenses held by the same patent holder

In practice, it is often difficult to identify licenses that are perfectly analogous to the license now in discussion. On the one hand, when past licenses were entered into under circumstances that differ from the parties' present circumstances, previous licenses may generally be referred to in determining the royalty rate if the parties can account for the differences, but validity of such reference vary depending on the level of difference.^{62, 63}

On the other hand, when there are great differences between the circumstances of the past license and present circumstances and it is difficult to reasonably account for such differences, it may then be difficult to consider the past license as being comparable and it will have less value in determining an appropriate royalty rate.⁶⁴

(b) Comparable licenses held by third parties

In referring to the past licensing terms of third parties who hold SEPs for the same standard, it may be possible to calculate an appropriate rate by comparing the number of SEPs owned by the rights holder to those held by the third party and multiplying the ratio obtained. In this case, the rate may be adjusted taking account of the value of the specific SEPs.

⁶¹ In *Lucent v. Gateway* (U.S., CAFC, 2009), the court stated that GPF3 (exclusive or nonexclusive) is applicable as a consideration factor.

⁶² In *Ericsson v. D-Link* (U.S., CAFC, 2014), the court stated that allegedly comparable licenses may cover more patents than are at issue in the action, include cross-licensing terms, cover foreign intellectual property rights, or, as here, be calculated as some percentage of the value of a multi-component product.

⁶³ In *Virnetx v. Cisco* (U.S., CAFC, 2014), the court stated that the "degree of comparability" of the license agreements is applicable as a consideration factor.

⁶⁴ In *Laser Dynamics v. Quanta* (U.S., CAFC 2012), the court stated that the propriety of using prior settlement agreements to prove the amount of a reasonable royalty is questionable. On the other hand, there are some arguments that licenses in litigation could also be referred to as comparable licenses.

(c) Patent pools

As an objective benchmark for determining a FRAND rate, one may use a method of comparing the rate charged by the patent pool for the same standard. If the degree of contribution to the standard of SEPs owned by the rights holder is higher than that to the patents in the patent pool, the rate for the SEPs will be higher than that for the patent pool. Meanwhile, if the degree of contribution to the standard of SEPs owned by the rights holders is lower than that to the patents in the patent pool, the rate for the SEPs will be lower than that for the patent pool.

It may also be necessary to note that a relatively low royalty is set as a result of taking into account the fact that negotiations, contracts and management of royalties are streamlined in the patent pool.⁶⁵

However, it should be noted that licensing terms for the patent pool are not always comparable. In studying whether the licensing terms for a patent pool are comparable, it may be appropriate to take into account the coverage rate and royalty record of each patent pool.⁶⁶

b. When comparable licenses do not exist

(General statement)

When a comparable license does not exist, it may be necessary to obtain the appropriate rate by calculating the ratio of the contribution of all the SEPs for the standard in the calculation base. This calculation method is generally called the Top Down approach. In this approach, the extent of the contribution of all SEPs to the standard (aggregate royalty rate for all SEPs that cover the standard) defines the upper limit of the rate.⁶⁷

⁶⁵ In *Microsoft v. Motorola* (U.S., federal district court, 2013), the court concluded that the royalty was triple of the pool royalty.

⁶⁶ In *Microsoft v. Motorola* (U.S., federal district court, 2013), the court stated that the problem with using patent pools as the de facto RAND royalty rate is that the patent-counting royalty allocation structure of pools does not consider the importance of a particular SEP to the standard or to the implementer's products as the court's hypothetical negotiation requires.

⁶⁷ In *Apple v. Samsung* (Japan, IP high court, 2014), the court adopted a Top Down approach and set the aggregate royalty rate at 5% for 3G based on the claims of the parties. In addition, in *TCL v. Ericsson* (U.S., federal district court, 2017), the court set the aggregate royalty at 5% for 2G/3G and at 6% or 10% for 4G.

(Avoiding royalty stacking)

When many rights holders individually demand royalties, there may be cases in which each royalty stacks up and the cost for practicing the standard becomes excessively high. This is called royalty stacking and is an issue that may occur when there are many rights holders that hold SEPs for the same standard.

As the extent of the contribution of all SEPs to the standards defines the upper limit of the rate, the Top Down approach is effective in avoiding such royalty stacking. From this standpoint, when the Bottom Up approach is adopted, it may be beneficial to check for royal stacking by also making a calculation using the Top Down approach.

4. Other Factors to Consider in Determining Rates

As stated above, royalties are calculated by (i) Calculation base multiplied by (ii) Rate. Specifically, the following procedures are used to calculate reasonable royalties.

- (i) Identify the calculation base within the product involved that includes the contribution of the essential part of the SEP technology
- (ii) Multiply the calculation base by the ratio of contribution by the SEP technology (rate)

In addition, (iii) Other factors are considered.

The following are factors frequently considered in practice. Other factors may also be considered.

a. Number of Licensees that Agreed to the Royalty Rate⁶⁸

It may be easier to show that there is an established royalty rate when there are many licensees who have agreed to the rate. Therefore, the number of licensees may be a factor in pointing out that the royalty is reasonable.

⁶⁸ Corresponding to GPF1.

b. Nature or Scope of License⁶⁹

Whether the license is exclusive or non-exclusive, or whether the sales area or destination of the products are limited may be factors in considering the appropriate royalty.

c. Essentiality/Validity/Infringement of Patent

There may be no need for an implementer to obtain a license if the “SEP” is not essential, if the patent is invalid, or if the implementer is not infringing the patented invention. However, even when the parties are disputing on essentiality, validity, or infringement in the negotiations, there are often situations in which licensing contracts are signed because of the risks and costs of litigation or in view of future implementation of the standard. In such cases, implementers may seek a suitable discount to the royalty.

The number of existing patents changes over time. Patent rights which duration expires and patent rights which are newly registered are taken into consideration in licensing negotiations.

d. Value of Individual Patents

Since the value of individual SEPs is essentially different, in calculating an appropriate royalty, there are cases in which the simple ownership ratio is not used but weights are used to reflect the value of individual patents more accurately.⁷⁰ For example, there is a view that patents that are extremely important to the standard should command a higher rate, while patents that are less important should command a lower rate.

However, as it is not easy to accurately analyze the value of individual patents, at present, in many cases the value of individual patents is actually treated as equal (pro rata).⁷¹

⁶⁹ Corresponding to GPF3.

⁷⁰ In *In re Innovatio* (U.S., federal district court, 2013), for example, rights holder’s patents were all of moderate to moderate-high importance to the standard, and therefore warranted a higher rate as compared to other patents essential to the standard.

⁷¹ For example, as an allocation method of royalties, there is a method of allocating based on the number of technologies adopted among contributions at the standard formulation stage, not the number of declared patents. This method can eliminate the influence of nonessential patents.

e. Negotiating History

The history of negotiation between the parties is a factor that influences determining an appropriate royalty. If there is no difference in royalty between an implementer who has engaged in negotiations in good faith and an implementer who has acted in bad faith in negotiations, there will be little incentive to negotiate in good faith. As a result, there is an approach of giving a suitable discount to a licensee that concludes a license soon after receiving a license offer or a licensee that requests a license before an offer is made. In this way, the length of the negotiating period for an implementer compared to that for other implementers in similar situations will be a factor in determining an appropriate royalty. There is a possibility that an implementer who delays or impedes negotiations will pay a substantially higher royalty.

In addition, the royalty may become higher after a lawsuit has been initiated, as compared to a case in which the parties came to an agreement in the negotiations. In general patent licenses, a rights holder may offer pre-litigation licensing rates at a “discount.” This indicates that once litigation starts, what is considered a reasonable royalty may become higher.⁷² Implementers should take full account of these factors in negotiating for licenses.⁷³

B. Non-discriminatory Royalties

SEP holders can demand a royalty at FRAND terms to implementers but the royalty has to be non-discriminatory. There are disputes regarding what is non-discriminatory.

1. Concept of Non-Discrimination

Although FRAND licensing terms have to be non-discriminatory, this does not mean that all potential licensees must receive licenses at the same royalty rate and amount. It is instead considered to mean that similarly situated licensees should

⁷² In *Laser Dynamics v. Quanta* (U.S., CAFC 2012), the court recognized that licensing rates in settlement agreements entered into during litigation may be higher than the rate that would have been reached outside of litigation due to the coercive nature of litigation itself.

⁷³ The contrasting rates may not necessarily be discriminatory because an implementer accepting a license pre-litigation may not be similarly situated to an implementer obtaining a license post-litigation.

not be treated differently.⁷⁴ The factors for determining whether licensees are in similar situations include whether the standard technology is used in the same way, the level of the company in the supply chain, and the geographic scope of business activities.^{75, 76}

2. Royalties for Different Uses

In the age of the IoT, companies in diverse type of industries will use technology for the same standard in the ICT field. Under these circumstances, rights holders may insist that royalty rates and amounts for the same standard technology should be different according to different uses, if the end products that use the technology are different.

On the other hand, implementers may claim that the same royalty rates and amounts should be applied regardless of the use for the same standard technology, and that it is discriminatory and contrary to FRAND terms if rights holders employ different royalty rates and amounts.

Based on the principle that royalties are determined in accordance with the extent of contribution of the patent, even when the same standard technology is used, if the extent of contribution of the patent for the product differs due to the different way of using the standard technology, the appropriate FRAND royalties may be different.

For example, the extent of contribution of the Wi-Fi technology which is a communication method combined with technologies for improving power

⁷⁴ In *Unwired Planet v. Huawei* (UK, high court, 2017), the court stated that it is discriminatory if the difference of the royalty rates distorts competition between the two licensees in the market. On the other hand, in *TCL v. Ericsson* (U.S., federal district court, 2017), regardless of whether it generally distorts the development of competition or standards, even if the implementer is alone, the court stated that it is discriminatory if the difference of the royalty rates causes damage.

⁷⁵ In *TCL v. Ericsson* (U.S., federal district court, 2017), the court concluded that the following factors could be considered in determining whether two companies are similarly situated: the geographic scope of the companies, the licenses required by the companies, and sales volumes. The court also concluded that the following factors should not be considered in determining whether two companies are similarly situated: overall financial success or risk, brand recognition, the operating systems of their devices, or the existence of retail stores.

⁷⁶ Whether or not the FRAND rate should be a range is divided by judicial precedents. In *Microsoft v. Motorola* (U.S., federal district court, 2013), the court determined an upper and lower bound of the FRAND range for Motorola's SEP portfolio. On the other hand, in *Unwired Planet v. Huawei* (UK, high court, 2017), the court determined that each region has only one FRAND royalty rate.

consumption efficiency to extend battery life may be larger for battery-powered mobile devices than that for desk top computers that do not use built-in batteries. There are views that in such cases, a rights holder seeking a higher royalty for mobile devices as compared to that for desk top computers will not be discriminatory.

Furthermore, in the ICT field, there are views that it is not discriminatory for a rights holder to apply different royalties for products that fully enjoy the capacity of the technology (e.g. self-driving car, remote surgery) and those that only use part of the capacity of the technology (e.g. smart meter) even if these products use the same standard technology.

C. Other

There are several methods for paying royalties. Depending on circumstances, different methods will be selected.

1. Fixed Rate and Fixed Amount

There is a fixed rate royalty and a fixed amount royalty. The fixed rate is decided as a ratio to the price of the whole product and the price of spare parts. It is necessary for implementers to know the price of products at all times when the price fluctuates according to market conditions, involving complicated procedures.

In order to reduce such complications, in practice, a method of deciding on a fixed amount of royalties regardless of fluctuations in the price of a product may be used. Although it then becomes relatively simple to collect royalties in such a case, when the price of a royalty-bearing product gradually decreases over time, the royalties may become too high for implementers.

2. Lump-Sum Payment and Running Royalty Payments

There are lump-sum payments and running royalty payments for paying royalties.⁷⁷ For lump-sum payments, although there are advantages in being able to avoid the risks of non-payment of royalties and the burden of monitoring whether the technology is being used, since the royalty will be fixed and paid before the value

⁷⁷ In *Lucent v. Gateway* (U.S., CAFC, 2009), the court stated that a running royalty is risky to rights holders because such a royalty is subject to the sales of the implementer, while a lump-sum payment does not require monitoring of sales. On the other hand, the court stated that a lump-sum payment has the benefit of being easy to calculate but may not accurately reflect the value of the patent to the technology.

and actual usage of the technology in the market have been established, there are risks of royalties being too high or too low compared with the actual price and usage.

For running royalty payments, although it is possible to calculate royalties that reflect the actual usage of the technology, there is a possibility that the amount invested for research and development will not be recovered since the amount to be paid will increase or decrease due to changes in sales or changes in technology trends.

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