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The Effect of FRAND Commitments on Patent Remedies

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5.1 INTRODUCTION

The rules and policies of many standards-development organizations (SDOs) require SDO participants to offer to license patents that are essential to the SDO's standards (standards-essential patents or SEPs) on terms that are "fair, reasonable, and non-discriminatory" (FRAND). This requirement is generally viewed as creating a binding obligation on the patent holder to offer or grant such licenses, though the precise content of that obligation may not be consistent across jurisdictions or SDOs. It is sometimes the case, however, that despite the existence of a FRAND obligation, the holder of a SEP and the manufacturer, seller, or user of a standardized product (an "implementer") do not enter into a license agreement, thereby causing the product to infringe the SEP. In such cases, if the parties cannot resolve their dispute privately, questions of legal liability and remedies arise.

The complex set of questions concerning the imposition of duties and liability for alleged breaches of FRAND commitments is beyond the scope of this chapter. We cover certain aspects, such as potential antitrust or competition law liability relating to such breaches, in Chapter 6. Here, we focus instead on the remedies that may be awarded once such liability is established. Such liability may be found either (or both) with respect to the SEP holder's failure to offer or grant a license on FRAND terms to the implementer, and/or the implementer's infringement of the SEPs prior to the SEP holder's granting of a license.

Assuming that liability is established, potential remedies for FRAND violations or patent infringement include monetary damages, specific performance, and injunctive relief. Monetary damages typically take the form of compensatory damages[1] paid by the implementer to the SEP holder for past infringement (i.e., the implementer's use of the patented technology prior to the issuance of a license), as well as enhanced damages under certain circumstances.[2] In return, implementers may seek specific

[1] *See* Chapters 1 and 2.

[2] *See* Chapter 3.

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performance requiring the SEP holder to grant a license complying with the relevant FRAND conditions, as well as monetary damages to compensate for the SEP holder's breach of its FRAND commitment.[3] In addition, a SEP holder may pursue injunctive relief of its own to prevent an implementer from continuing to infringe until a license is granted.

Because specific performance is contractual or pseudo-contractual in nature and thus focuses primarily on *the terms* of the SEP holder's FRAND commitment, we consider it beyond the scope of this project. We ask instead what effect, if any, *the existence* of a prior FRAND commitment should have on the patent law remedies that a SEP holder might otherwise be able to obtain from an infringer.

5.2 FRAND COMMITMENTS AND MONETARY PATENT DAMAGES

In general, a patent holder is entitled to monetary compensation when its patent is infringed. As described in the preceding chapters, the measure of damages varies from country to country. In this section we first consider whether a FRAND commitment affects the level of monetary damages to which a SEP holder is entitled when an unlicensed implementer infringes the SEP, as compared with an award of damages assessed on general patent law principles. For example, is the "reasonable" in FRAND the same as the "reasonable" in reasonable royalty damages awarded by U.S. courts? A related question is whether the existence of a FRAND commitment precludes a monetary award based on lost profits, or a disgorgement of infringer profits, which might be available in the absence of a FRAND commitment, particularly in jurisdictions that do not base patent damages on the award of a reasonable royalty. We begin by surveying the applicable law in the United States and the European Union, and then make recommendations.

We do not address the question whether an award of "reasonable" royalties to the holder of an infringed SEP who has not made a FRAND commitment should equate to "reasonable" royalties awarded to a SEP holder that has made a FRAND commitment. The question of how to treat such SDO "outsiders" is beyond the scope of this chapter.[4]

3 For example, in *Microsoft Corp.* v. *Motorola, Inc.* (9th Cir. 2015) (U.S.), Microsoft was able to collect approximately $15 million in damages for Motorola's breach of its FRAND commitment, which were primarily attributable to the costs Microsoft incurred in moving a facility out of Germany.

4 For a discussion of the extent to which outsiders enforce SEPs, *see* Contreras 2016; *Rembrandt Wireless Tech., LP* v. *Samsung Elects. Co., Ltd.* (E.D. Tex. 2016) (U.S.) (awarding reasonable royalty damages to a holder of SEPs covering the Bluetooth standard, even though SDO participants who developed the standard committed to grant licenses on a royalty-free basis); *CSIRO* v. *Cisco Sys., Inc.* (Fed. Cir. 2015) (U.S.) (awarding "reasonable royalty" damages to SEP holder that did not make a FRAND commitment).

5.2.1 *United States*

1 Reasonable Royalty

As discussed in Chapter 1, in the United States the primary statutory measure of damages for patent infringement is a "reasonable royalty."[5] As a result, several U.S. courts that have calculated FRAND royalty rates for SEPs have looked to traditional methodologies for determining reasonable royalty damages.

For the past several decades, the calculation of reasonable royalty damages in the United States has generally followed the fifteen-factor "bottom-up" methodology[6] introduced in *Georgia-Pacific Corp.* v. *U.S. Plywood Corp.*[7] However, because this framework assumes that the patent holder and the infringer have no pre-existing relationship or duty toward one another, many of the assumptions underlying this analysis do not hold in cases involving FRAND-committed SEPs. This disconnect has been pointed out in several cases including *Microsoft Corp.* v. *Motorola, Inc.* and *Ericsson, Inc.* v. *D-Link Sys.* In *Microsoft*, the court expressly modified twelve of the fifteen factors as follows:

(i) The lack of comparability of negotiated royalty terms that fail to account for RAND obligations. (Factors 1 and 12);
(ii) The importance of the value of the patented technology apart from the value associated with incorporation of the patented technology into the standard. (Factors 6, 8, 10, 11, and 13);
(iii) The importance of alternatives that could have been written into the standard instead of the patented technology, with the focus on the period before the standard was adopted and implemented. (Factor 9);
(iv) The purpose of the RAND commitment to encourage widespread adoption of the standard through avoidance of holdup and stacking. (Factor 15);
(v) The irrelevance of some of the factors because they do not relate to the RAND context (e.g., whether patentee has a policy to license others, relationship of the licensor and licensee, and the patent term). (Factors 4, 5, and 7).[8]

In *Ericsson*, the Federal Circuit noted several respects in which the *Georgia-Pacific* factors were both irrelevant and contrary to the RAND commitment under consideration.[9] Thus, as the lower court did in *Microsoft*, the Federal Circuit criticized the use of *Georgia-Pacific* Factors 4, 5, 8, 9, and 10 when considering royalties subject to a RAND commitment.[10] Though the court did not hold that

[5] U.S. Patent Act, 35 U.S.C. § 284.
[6] For a discussion of bottom-up versus top-down royalty calculation methodologies, *see* Section 5.2.4 below.
[7] *Georgia-Pacific Corp.* v. *U.S. Plywood Corp.* (S.D.N.Y. 1970, p.1120) (U.S.). *See* Chapter 1.
[8] *Microsoft Corp.* v. *Motorola, Inc.* (W. D. Wash. 2013, ¶¶ 99–110) (U.S.).
[9] *Ericsson, Inc.* v. *D-Link Sys.* (Fed. Cir. 2014, p.1230–32) (U.S.).
[10] *Id.*

a modified version of the *Georgia-Pacific* factors must always be used in cases involving SEPs, it found that the combination of errors in the lower court's instructions to the jury was significant enough to warrant remand.[11]

These changes suggest that the *Georgia-Pacific* framework, as originally conceived, is not well suited to the determination of FRAND royalty levels.[12] Moreover, there appears to be nothing in U.S. law that compels courts to utilize either the *Georgia-Pacific* framework, or patent damages law in general, to determine royalties complying with a SEP holder's FRAND commitment. What's more, the inconsistent and ad hoc application of the *Georgia-Pacific* factors to different FRAND royalty calculations has led to significantly different outcomes in different courts in the United States, even in cases concerning the same technical feature of a single standard.[13]

2 Enhanced Damages

As discussed in Chapter 3, another important element of U.S. patent damages law is the availability of "enhanced" (i.e., up to treble) damages when infringement is found to have been willful. The standard for willfulness supporting an award of enhanced damages has recently been clarified, and somewhat liberalized, by the Supreme Court of the United States in *Halo Elecs.* v. *Pulse Elecs.*[14] It is currently debated whether a manufacturer's implementation of a technical standard in a product without a license from the holder of a FRAND-committed SEP should be considered willful if the SEP is, indeed, infringed. On one hand, the manufacturer is clearly aware of the standard and, in many cases, the patents declared to be essential to the standard are listed in a public database. What's more, the manufacturer may even have received a notification of the patent from the patent holder. These factors might weigh in favor of a finding that the manufacturer's infringement was willful.[15] But on the other hand, independent analysts have determined that a large number of patents declared to be essential to various standards are not, in their view, actually essential,[16] and obtaining a reliable legal opinion (see Chapter 3) regarding which among hundreds or thousands of patents listed in a public database are essential to a standard is likely prohibitive in terms of cost and time. Moreover, even patents that are essential to a standard are sometimes found to be invalid or not infringed by a particular product

11 *Id.* at 1235.

12 Nor, as argued in Chapter 1, in the general damages context either.

13 *See* Bartlett & Contreras 2017 (discussing five different U.S. decisions arriving at divergent FRAND royalty rates for aspects of the IEEE Wi-Fi standard).

14 *Halo Elec., Inc.* v. *Pulse Elec., Inc.* (U.S. 2016) (U.S.).

15 *See* Sidak 2016b, 1109–12 (discussing criteria for enhanced damages in the context of SEPs).

16 For example, Goodman & Myers 2005, Fairfield 2007, and Fairfield 2010 found that only 27, 28, and 50 percent of patent families declared as "essential" to ETSI's GSM, WCDMA, and LTE standards, respectively, were actually essential to implementation of those standards.

implementing the standard.[17] These factors tend to weigh against a finding of willfulness with respect to the infringement of SEPs by standard implementers. However, even if weighing strongly against a finding of willfulness, it is not clear that such factors should amount to a categorical exclusion of enhanced damages in the case of SEP infringement.[18]

To date, we are aware of only one U.S. district court decision enhancing damages for the infringement of SEPs.[19] However, at least one member of the Court of Appeals for the Federal Circuit has acknowledged their potential availability, at least when a potential licensee has negotiated in bad faith.[20]

Beyond the threshold question whether enhanced damages may be available for the infringement of SEPs is a further question regarding the ways that the availability of enhanced damages may affect the conduct of parties in the standardization environment. As noted above, the standard measure of damages for patent infringement in the United States is a "reasonable royalty." A "reasonable" royalty is also what is required to be paid under a FRAND commitment. Thus, an opportunistic manufacturer of standardized products could decide that the most efficient course of action is not to seek a FRAND license from a SEP holder at all, but instead to delay until it is sued for infringement, at which point its maximum liability (assuming that both patent validity and infringement are established) would only be the FRAND royalty it otherwise would have paid *ex ante*. As discussed elsewhere, this form of conduct by standards implementers has been termed "holdout."[21]

The availability of enhanced damages (in addition to awards of attorney's fees and pre- and post-judgment interest) could change a standard implementer's calculus somewhat. That is, if the implementer willfully infringes SEPs under the relevant legal standards and refuses to pay royalties under a FRAND license offered by the SEP holder, then enhanced damages may be awarded in an eventual infringement

17 *See, e.g.*, Netgear, Inc., Annual Report (Form 10-K) (Feb. 16, 2018), p.86 (reporting that the three patent claims covering 3G wireless telecom standards that were found to be infringed by a jury in *Ericsson, Inc.* v. *D-Link Sys.* (E.D. Tex 2013) (U.S.), *aff'd* (Fed. Cir. 2014) (U.S.) were subsequently found by the PTAB to be invalid in a series of 2015 inter partes review proceedings that were subsequently affirmed by the Federal Circuit in 2017).

18 *See* Sidak 2016b, 1105–07 (arguing that a FRAND commitment should not per se foreclose the possibility of enhanced damages in SEP infringement cases).

19 *See Core Wireless Licensing S.A.R.L.* v. *LG Electronics, Inc.* (E.D. Tex. 2016, p.2) (U.S.) (court enhanced damages by 20 percent following jury finding of willful infringement). *See also* Sidak 2016b, 1101–02 (discussing case).

20 The prospect of enhanced damages for the intentional violation of a FRAND commitment has been noted by Chief Judge Prost of the U.S. Court of Appeals for the Federal Circuit, who wrote in the context of a dispute over the issuance of an injunction for SEPs, that "if a trial court believes that an infringer previously engaged in bad faith negotiations, it is entitled to increase the damages to account for any harm to the patentee as a result of that behavior." *Apple, Inc.* v. *Motorola, Inc.* (Fed. Cir. 2014, p.1342) (U.S.) (Prost, J., concurring). For additional discussion of relevant literature, *see* Chapter 7 n.177.

21 This is sometimes also referred to as the "catch-me-if-you-can" problem: for more discussion, *see* Chapters 3 and 7.

suit by the SEP holder. If so, the cost of holding out could far exceed the FRAND royalty that would originally have been payable. Accordingly, the availability of enhanced damages, at least in the United States, could reduce the risk that opportunistic standards implementers will hold out and refuse to pay FRAND royalties that are legitimately due.

5.2.2 *European Union – Applicability of* Huawei *v.* ZTE *to Monetary Remedies*

As discussed in Chapter 6 and in Section 5.3 below, the Court of Justice of the European Union (CJEU) in *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* lays out a procedure that a SEP holder must follow in order to avoid committing an abuse of its dominant position under Article 102 of the Treaty on the Functioning of the European Union (TFEU) when it seeks an injunction to prevent infringement of a SEP. The CJEU's decision in *Huawei*, however, does not explicitly address the issue of monetary damages. In fact, the CJEU states in *Huawei* that Article 102 of the TFEU does not prohibit a SEP holder "from bringing an action for infringement against the alleged infringer of its SEP and seeking the rendering of accounts in relation to past acts of use of that SEP or an award of damages in respect of those acts of use."[22] This suggestion has been followed in subsequent decisions rendered by German courts. In *NTT DoCoMo* v. *HTC*, for instance, the Mannheim District Court noted that a SEP holder that has made a FRAND commitment must follow the *Huawei* rules of conduct only with regard to an action for injunction or the recall of products. It is, however, free to bring an action seeking monetary remedies in relation to past acts of infringement.[23] Comparable statements regarding the rules of conduct derived from *Huawei* v. *ZTE* were made by the Mannheim District Court in *Pioneer* v. *Acer*[24] and *Philips* v. *Archos*[25] and by the Düsseldorf District Court in *Unwired Planet* v. *Samsung*.[26] Accordingly, a SEP holder does not commit an abuse under Article 102 of the TFEU even if it brings an action for damages without having notified the implementer of an infringement and without having offered it a FRAND license.

This said, the obligations developed by the CJEU in *Huawei* v. *ZTE* do have an *indirect* impact on the extent to which damages and the rendering of accounts are due. Where the SEP holder fails to grant a FRAND license although it has made a FRAND commitment and the implementer has expressed its readiness to take a license, damages are limited to the FRAND royalty level (presumably excluding other forms of damages such as lost profits and disgorgement of infringer's profits)

22 *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* (CJEU 2015, ¶ 76) (EU).
23 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC*, ¶ II, 1 (Ger.).
24 LG Mannheim v. 8.1.2016 – 7 O 96/14 – *Pioneer* v. *Acer*, ¶ 79 (Ger.).
25 LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos*, ¶ III, IV, 1 (Ger.).
26 LG Düsseldorf v. 19.1.2016 – 4b O 120/14 – *Unwired Planet* v. *Samsung*, ¶ VII, 6, b, aa, bb (Ger.).

but *only* for the period after the SEP holder's abusive refusal to license.[27] Claims for information and the rendering of accounts must, in this event, be limited to what is necessary for determining these FRAND-based damages.[28]

What's more, implementers of standards who have been refused a license in violation of a SEP holder's FRAND commitment may themselves be entitled to monetary damages under some interpretations of these cases.[29] Though this theory has not yet been tested in court, such claims could be similar to U.S. breach of contract claims that have been brought successfully against SEP holders in cases such as *Microsoft Corp.* v. *Motorola, Inc.* Moreover, it is possible that if a standards implementer fails to comply with the procedures outlined in *Huawei* v. *ZTE*, a SEP holder, without violating Article 102 of the TFEU, may be permitted to seek damages in excess of reasonable royalties, including lost profits or disgorgement of the infringer's profits.[30]

5.2.3 *National Damages Laws*

The courts of every country will, in general, evaluate claims for FRAND damages in view of its national rules and precedents regarding contractual interpretation and remedies. A full discussion of the rules of every country is beyond the scope of this chapter. However, in the Appendix we provide a discussion of several exemplary countries (Germany, Switzerland, Korea, Japan, and China) for illustrative purposes. It is important to note, however, that while we discuss the potential impact of FRAND commitments on monetary patent damages under a variety of national laws, we do not necessarily believe that FRAND royalties negotiated under global license agreements, which are increasingly viewed as the norm,[31] should specify royalties on a country-by-country basis, or that the interpretation of FRAND under the policy of a particular SDO should vary based on the patent damages laws of the country in which parties to a dispute may adjudicate the level of FRAND royalties.[32]

[27] *Id.* at ¶ VII, 6, b, dd.

[28] *Id.* at ¶ VII, 6, b, ee.

[29] LG Düsseldorf v. 19.1.2016 – 4b O 120/14 – *Unwired Planet* v. *Samsung*, ¶ 353 (Ger.); LG Düsseldorf v. 19.1.2016 – 4b O 122/14 – *Unwired Planet* v. *Samsung*, ¶ 370 (Ger.); Picht 2018, 42.

[30] *See id.* at ¶ VII, 6, b, cc, dd.

[31] *See, e.g., Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK); *TCL Commc'ns Tech. Holdings, Ltd.* v. *Telefonaktiebolaget LM Ericsson* (C.D. Cal. 2017) (U.S.). For a discussion of issues surrounding national versus global FRAND licensing, *see* Contreras 2017b.

[32] *See* Teece et al. 2012, 34 ("[T]o suggest that RAND-reasonable is to be interpreted in accordance with the vagaries of different countries' patent infringement damages law could make what is and what is not RAND-reasonable different from country to country."). This being said, recent cases have appropriately (if imperfectly) attempted to adjust determined FRAND royalty rates based on varying market factors, patent coverage, and patent strength in different regions of the world (e.g., United States/Europe v. China and so-called minor markets). *See, e.g., Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK); *TCL Commc'ns Tech. Holdings, Ltd.* v. *Telefonaktiebolaget LM Ericsson* (C.D. Cal. 2017) (U.S.).

5.2.4 *Discussion and Analysis: Monetary Damages and FRAND*

The fact that courts in the United States have chosen to determine FRAND royalty rates using the methodology of patent damages calculations (including the *Georgia-Pacific* framework) is, most likely, the result of the fact that the term "reasonable royalty" is used in both the U.S. Patent Act and the SDO policies establishing FRAND commitments. Yet these two concepts (patent damages and FRAND royalty rates) arose via different historical pathways[33] and are intended to achieve different goals. FRAND royalty rates are created through private agreements among SEP holders and SDOs, or public promises made by SEP holders in the marketplace. As pointed out in Chapter 1, in the vast number of license agreements made outside the shadow of litigation, royalty rates are not determined using the analytical framework that courts employ to calculate damages in litigation. No SDOs of which we are aware have pointed to the *Georgia-Pacific* framework, or patent damages analysis in general, as guideposts for determining FRAND rates.[34] To the extent that SDO participants have suggested FRAND rates for different standards, these rates have been developed based on industry norms and market factors,[35] rather than the hypothetical negotiation framework mandated under *Georgia-Pacific*.[36]

But because the term "reasonable" is used in these two different contexts – patent damages and FRAND licenses – the temptation to recruit one (the extensive body of case precedent relating to patent damages) for use when addressing the other (the proper level of FRAND royalties) has proven too tempting to resist for U.S. courts. As a result, U.S. courts determining FRAND royalty rates regularly invoke the case law and methodologies of reasonable royalty damages, including the imperfect *Georgia-Pacific* framework and all of its baggage, when calculating a FRAND royalty or instructing the jury in doing so, leading to an apparent convergence of contractual FRAND damages and "reasonable royalty" patent infringement damages.[37]

Outside of the United States, where patent damages are not so closely tied to a "reasonable royalty," there is less temptation for courts to tie FRAND royalties to patent damages calculations, though this has on occasion occurred, for example, in *Samsung* v. *Apple Japan*.[38] In other jurisdictions such as Korea, however, patent

[33] The historical origins of modern FRAND commitments in the United States can be traced to a series of antitrust remedial orders entered from the 1940s to the 1970s that required that patent holders found to have engaged in anticompetitive conduct make licenses to those patents available on terms that were "reasonable." This language was later adopted by ANSI and other SDOs around the world. *See* Contreras 2015b.

[34] *See also* Teece et al. 2012, 33–34 ("[W]e are not aware of any SSO that has explicitly announced that [RAND royalties and 'reasonable' royalty patent damages] are intended to be synonymous.").

[35] *See* Contreras 2015a.

[36] Chapter 1 critiques the *Georgia-Pacific* factors for much the same reason in respect of reasonable royalty determinations more generally.

[37] *See* Contreras & Gilbert 2015 (observing this convergence but arguing that both FRAND royalty calculations and the U.S. reasonable royalty damage framework should be revamped to focus on the "incremental value" of the patented technology to the infringing product).

[38] *See Samsung Elecs. Co.* v. *Apple Japan LLC* (IP High Ct. 2014) (Japan).

damages are based on the disgorgement of profits of the infringer, which bear little relation to reasonable royalties.[39] To be sure, in the non-U.S. cases that have resulted in written decisions concerning FRAND royalty determinations to date, none have made reference to *Georgia-Pacific* or its fifteen-factor analytical framework.

The *Georgia-Pacific* framework supports what has been termed a "bottom-up" approach to calculating patent royalties. Under a bottom-up approach, royalties are determined case by case depending on the determined value of the patents in suit, without significant regard for the value of other patents that may cover the same technology or standard. Such approaches are discussed in Chapter 1, both with and without application of the *Georgia-Pacific* framework.

One promising alternative to a bottom-up approach in the area of standards-essential patents is what has been termed a "top-down" approach to determining FRAND royalties. Such top-down mechanisms begin by determining the aggregate royalty burden associated with a standard when considering the royalties owed to any particular patent holder.[40] As the U.S. District Court for the Northern District of Illinois noted in *In re Innovatio IP Ventures, LLC Patent Litigation*, "the determination of a [F]RAND royalty must address the risk of royalty stacking by considering the aggregate royalties that would apply if other [SEP] holders made royalty demands of the implementer."[41] Top-down approaches recognize that when multiple patents cover a single standard, the rate charged by one SEP holder will necessarily affect the rates that the other SEP holders are able to obtain from a single manufacturer.[42] Once an aggregate royalty is determined, various methodologies can then be used to allocate that total among individual SEP holders.[43] As explained by the European Commission in a recent communication, "an individual SEP cannot be considered in isolation. Parties need to take into account a reasonable aggregate rate for the standard, assessing the overall added value of the technology."[44]

39 *See Samsung Elecs. Co.* v. *Apple Korea Ltd.* (Dist. Ct. 2012) (Kor.).

40 *See* Cotter 2018, 206–07 (discussing the *Innovatio* top-down analysis); Pentheroudakis & Baron 2017, 95–96 (analyzing top-down approaches in *Innovatio* and other cases); Bartlett & Contreras 2017 (discussing the benefits of top-down approaches).

41 *In re Innovatio IP Ventures, LLC Patent Litigation* (N.D. Ill. 2013, p.9) (U.S.) (internal quotes omitted). It is worth noting that the specific top-down royalty approach used by the court in *Innovatio*, which was based on the deemed profit of a hypothetical component supplier, was somewhat unusual and has not been followed by other courts, nor do we endorse it.

42 *See* Lemley & Shapiro 2007a, 2011 ("[T]he royalty rate negotiated by one patent holder is affected by the rates the downstream firm pays to other patent holders, so a proper analysis must account for the joint determination of all the royalty rates.").

43 Allocation methodologies, while critical to the determination of FRAND royalties, are subject to an extensive literature, a discussion of which is beyond the scope of this chapter. *See generally* Bartlett & Contreras 2017, 208–09 (cataloging a range of patent valuation and allocation methodologies, including numerical proportionality/headcount, citation count, cost recovery, real option value, substitute cost, footprint, discounted cash flow, and comparable license analysis).

44 European Commission, COM (2017) 712 final.

Such a top-down approach was used by the Japanese IP High Court in *Samsung* v. *Apple Japan*, which held that the aggregate royalty burden for the 3G UMTS standard should not exceed 5 percent, based on four public statements and informal agreements among industry participants relating to the standard.[45] The court then allocated a portion of this total royalty to Samsung's asserted UMTS-essential patent based on the total number of SEPs likely to be essential to the standard.[46]

The English Patents Court used two methods to calculate a FRAND royalty in *Unwired Planet* v. *Huawei*:[47] one based on comparable licenses and one (used to check the former result) based on a top-down methodology similar to that of the Japanese IP High Court in *Samsung* v. *Apple Japan*. In *Unwired Planet*, the court determined the aggregate royalty attributable to a standard under all applicable SEPs and then allocated an appropriate amount to the SEP holder asserting the patents-in-suit. Under the court's top-down methodology, the FRAND royalty was calculated as the aggregate SEP royalty burden of a particular standard on a product (e.g., the portion of a smartphone's price that is attributable to the 4G standard) multiplied by the percentage of 4G SEPs held by the plaintiff.[48] To calculate the aggregate royalty burden attributable to the various standards in suit, the court considered public statements made by other holders of SEPs with respect to royalties on those standards.[49] It then calculated the plaintiff's share of the total SEP pool, using a variety of counting and filtering methodologies, including a filter for the likely essentiality of the patents in the asserted portfolio.[50] The result calculated by the court was consistent with the result that it obtained using a methodology based on comparable licenses.

Top-down approaches can avoid both the potential inconsistencies associated with ad hoc adaptations of damages frameworks such as *Georgia-Pacific* and contrast with other "bottom-up" royalty approaches, in which royalties due to individual patent holders are determined independently of one another, whereby the total royalty burden emerges only as the sum of its individual components.[51] Courts applying bottom-up approaches have used different royalty calculation criteria and

45 *Samsung Elecs. Co.* v. *Apple Japan LLC* (IP High Ct. 2014, p.131) (Japan) (FRAND I).

46 *Id.* at 132, 137–38 (noting that out of 1,889 patent families declared as essential to UMTS, an independent research report issued by Fairfield Resources International, Inc. found that only 529 of these patent families "are or are likely to be essential" to the standard. Accordingly, the court based the royalty due to Samsung on a total pool of 529, rather than 1,889, SEP families). For a more detailed discussion of the methodology, *see* Siebrasse & Cotter 2017b, 384–85.

47 *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.* (Pat 2017) (UK).

48 *Id.* at ¶ 178.

49 *Id.* at ¶¶ 264–72. While such statements are not ideal data points on which to base aggregate royalty determinations and can be, as the court acknowledged, both unreliable and self-serving, they are, to date, the most useful data available. *But see* Contreras 2017a (suggesting that joint negotiation of such rates within SDOs would yield better data on which to base such determinations).

50 *Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017, ¶¶ 325–29) (UK). For a more detailed discussion of the methodology, *see* Siebrasse & Cotter 2017b, 384–86.

51 *See* Bartlett & Contreras 2017, 293–95 (discussing and providing examples of bottom-up calculations).

factors on a case-by-case basis, even when patents covering the same features of the same standard have been involved, thus yielding inconsistent and potentially excessive results.[52] For example, in 2013 and 2014, five different U.S. district courts, either in bench trials or through a jury, calculated royalties for a total of thirty-five SEPs covering Wi-Fi standards. The aggregate royalty for these thirty-five patents amounted to approximately 4.5 percent of the total sale price of a typical $50 Wi-Fi router.[53] Yet it has been estimated that there are approximately 3,000 patents covering the Wi-Fi standard,[54] nearly one hundred times the number subject to adjudication thus far. Were the royalty for each of these patents to be calculated in a similarly uncoordinated, bottom-up manner, the aggregate patent royalty on a Wi-Fi router could easily surpass the product's total selling price by an order of magnitude or more.

This being said, implementing top-down approaches is not without its challenges and practical difficulties. Most notably, there is not yet a uniformly accepted methodology for determining the aggregate royalty level for all patents covering a particular standard. In the *Apple Japan* and *Unwired Planet* cases discussed above, the courts relied on public statements made by SEP holders, statements that at least one court acknowledged to be of limited reliability and manifestly "self-serving."[55] What's more, even once an aggregate royalty for all patents covering a standard is determined, a methodology must be developed to allocate that aggregate royalty among the many different holders of SEPs covering that standard. In most cases to date, courts using top-down methodologies have simply allocated the aggregate royalty among SEP holders on a simple "numerical proportionality" or one-patent-one-share basis.[56] While this methodology is easily applied, it overlooks inherent value differences among patents such as those identified in *Microsoft Corp.* v. *Motorola, Inc.*

More broadly, while in principle a top-down methodology has several attractive features as compared with a bottom-up approach, its application to a given case is only as good as the available evidence. Because the top-down and bottom-up approaches rely on different types of evidence, one or the other might be preferable in a particular case, given the evidence at hand.

52 *See id*. at 295–96 and table 2.

53 *Id.*

54 *In re Innovatio IP Ventures, LLC Patent Litigation* (N.D. Ill. 2013, p.41) (U.S.).

55 *Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK). *See also TCL Commc'ns Tech. Holdings, Ltd.* v. *Telefonaktiebolaget LM Ericsson* (C.D. Cal. 2017) (U.S.) (court similarly relying on public statements); Contreras 2017a (discussing methodologies for aggregate royalty determination). This being said, unlike patents other than SEPs, such public statements do exist in the context of SEPs, at least giving some indication what relevant parties have concluded about aggregate value. In *In re Innovatio* the court relied on the profit margin on the smallest salable patent practicing unit: for a discussion and critique, see Siebrasse and Cotter 2017b, 381–82 who suggest that the methodology used in *Innovatio* was flawed in various respects.

56 As Birss. J, noted in *Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK), "patent counting" may be unavoidable when large numbers of patents are involved.

For the foregoing reasons, we recommend that (1) consistent with the recommendations in Chapter 1, courts assessing FRAND royalty rates, particularly outside the United States, reject strict application of the *Georgia-Pacific* fifteen-factor hypothetical negotiation framework when making that assessment, and (2) courts assessing FRAND royalty rates select a methodology for calculating these rates that is best supported by the available evidence, whether such evidence be sufficiently comparable license agreements covering the same patents, or general consensus on aggregate royalty rates for an overall standard or technology, and, if the evidence would support using multiple approaches, consider utilizing both bottom-up and top-down royalty calculation methodologies and comparing the results. We also propose that further research be conducted regarding suitable methodologies for determining the aggregate top-down royalty burden for particular standards and for allocating aggregate royalties among individual holders of SEPs, with the understanding that if a reliable method for determining such an aggregate royalty burden can be developed, it would result in a desirable methodology for calculating FRAND royalty rates.

Finally, we recognize that there may be a potential role for enhanced damages in deterring intentional "holdout" conduct of a potential licensee, and thus propose that further research be conducted regarding the potential deterrent effect of such damages on holdout behavior in the SEP context. We take no position regarding the potential availability of patent damages in excess of FRAND levels under German or EU case law.

5.3 FRAND COMMITMENTS AND INJUNCTIVE RELIEF

5.3.1 *United States*

The judicial framework for injunctive relief in patent cases in the United States is set forth in the Supreme Court of the United States's 2006 decision in *eBay* v. *MercExchange*, which is discussed at length in Chapter 4. Under *eBay*, a court considering whether to grant an injunction to a SEP holder must balance four equitable factors: whether the SEP holder would suffer irreparable harm absent issuance of the injunction, whether the SEP holder would adequately be compensated by monetary damages, whether a balancing of interests of the parties favors granting the injunction, and the effect of the injunction on the public interest.

In *Microsoft Corp.* v. *Motorola, Inc.*, Motorola sought an injunction to prevent Microsoft's continued infringement of Motorola's patents covering two standards (IEEE's 802.11 and ITU's H.264). The court found that Motorola made FRAND commitments with respect to these patents, and that Microsoft agreed to accept a license on reasonable terms. The court evaluated these facts in view of the four *eBay* factors and determined that Motorola did not suffer an irreparable injury or show that monetary damages would be inadequate to compensate it for the infringement. Accordingly, the court denied Motorola's request for an injunction. In *Realtek Semiconductor Corp.* v. *LSI Corp.*,[57] the U.S. District Court for the Northern District of California held that a SEP holder breached its FRAND commitment by seeking injunctive relief against an implementer of a standard *before* the patent holder offered a license to the implementer. Again, the injunction was denied.

These district court decisions laid the groundwork for the Federal Circuit to consider the issue of permanent injunctive relief in FRAND-related cases. In *Apple, Inc.* v. *Motorola, Inc.*, the Federal Circuit analyzed Motorola's request for an injunction against the sale of Apple products allegedly infringing Motorola's FRAND-committed SEPs.[58] The trial judge denied Motorola's request, reasoning that a patent holder making a FRAND commitment, by definition, has acknowledged that a monetary royalty would be adequate compensation for a license under the patent, thereby eliminating any argument that the infringement would cause the patent holder irreparable harm under *eBay*.[59]

Though the Federal Circuit panel was divided on some issues, all three members of the panel concurred that "[t]o the extent that the district court applied a *per se* rule that injunctions are unavailable for SEPs, it erred."[60] The court reasoned that the *eBay* framework "provides ample strength and flexibility for analyzing FRAND-committed patents and industry standards in general," and found no reason to create "a separate rule or analytical framework for addressing injunctions for FRAND-committed patents."[61] The court acknowledged that under the *eBay* framework, "a patentee subject to FRAND commitments may have difficulty establishing irreparable harm."[62] Nevertheless, "an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect."[63] With this in mind, the Federal Circuit affirmed the district court's rejection of Motorola's request for an injunction.[64]

Chief Judge Rader, dissenting-in-part, argued that a genuine issue of material fact existed regarding Apple's conduct with respect to the acceptance of a FRAND

57 *Realtek Semiconductor Corp.* v. *LSI Corp.* (N.D. Cal. 2014) (U.S.).

58 *Apple, Inc.* v. *Motorola, Inc.* (Fed. Cir. 2014) (U.S.).

59 *Apple, Inc.* v. *Motorola, Inc.* (N.D. Ill. 2012) (U.S.).

60 *Apple, Inc.* v. *Motorola, Inc.* (Fed. Cir. 2014, p.1331) (U.S.).

61 *Id.* at 1331–32.

62 *Id.* at 1332.

63 *Id.* (citing DOJ & USPTO 2013). As discussed above in Section 5.2.1.2, this phenomenon is known as "holdout" or "reverse holdup" and is said to occur when an infringer refuses in bad faith to accept the FRAND license terms offered by a SEP holder.

64 *Apple, Inc.* v. *Motorola, Inc.* (Fed. Cir. 2014, p.1332) (U.S.). Interestingly, even though *Apple* v. *Motorola* did not involve antitrust issues (and despite the fact that the Department of Justice (DOJ) is required to uphold the law as it is fashioned by the courts of the United States), in 2017 the head of the DOJ's Antitrust Division sharply critiqued the Federal Circuit's reasoning in *Apple* v. *Motorola*, implying that it transformed FRAND commitments into a "compulsory licensing scheme." Delrahim 2017.

license from Motorola (i.e., potential holdout) and that the case should have been remanded for further fact finding on this issue.[65] In sharp contrast, Judge Prost, concurring-in-part and dissenting-in-part, disagreed with the majority's suggestion that an alleged infringer's refusal to negotiate a license could ever serve as a basis for issuing an injunction on a FRAND-committed patent.[66] She reasoned that while a potential licensee's bad faith negotiation might justify an award of enhanced damages (see discussion above), the *eBay* "irreparable harm" test would nevertheless militate against granting an injunction on a FRAND-committed patent.[67] However, Judge Prost conceded that an injunction might be appropriate if the patentee were unable to collect the damages to which it was entitled, for example, if the infringer refused to pay an adjudicated damage award or was beyond the jurisdiction of the court.[68]

The U.S. Department of Justice (DOJ) and Federal Trade Commission (FTC) have also taken an interest in the propriety of parties bound by FRAND commitments seeking injunctive relief. In 2011, the FTC issued guidelines specifying that under *eBay*, injunctive relief might not always be justified in the FRAND context, writing that "[a] prior [F]RAND commitment can provide strong evidence that denial of the injunction and ongoing royalties will not irreparably harm the patentee."[69] And in 2012, the DOJ approved three large patent acquisition transactions only after the involved parties (Apple, Google, and Microsoft) committed not to seek injunctions preventing the use of FRAND-committed SEPs.[70]

In late 2012 and 2013, the FTC brought two actions under Section 5 of the FTC Act to address suspected violations of FRAND commitments.[71] In the first such action, the FTC investigated Robert Bosch GmbH in connection with its proposed acquisition of a firm called SPX.[72] According to the complaint, SPX participated in an SDO developing standards for automotive cooling systems.[73] Despite having made a FRAND commitment to the SDO, SPX asserted two patents covering the SDO's standards against suspected infringers and then sought injunctive relief to prevent future sales of infringing products.[74] The FTC argued that SPX's attempt to obtain injunctive relief in the face of its FRAND commitment was inherently coercive and oppressive, and thereby constituted an unfair method of competition in violation of Section 5. Bosch settled the action by committing that SPX would no longer seek injunctive relief in this context.

65 *Apple, Inc.* v. *Motorola, Inc.* at 1333–34.
66 *Id.* at 1342.
67 *Id.*
68 *Id.* at 1343.
69 FTC 2011, 235.
70 *See* Contreras 2012.
71 Under Section 5 of the FTC Act, 15 U.S.C. § 45(a)(1), the FTC may prosecute "unfair methods of competition" and "unfair or deceptive acts or practices."
72 *In the Matter of Robert Bosch GmbH* (FTC Apr. 23, 2013) (U.S.).
73 *Id.* at 715–19.
74 *Id.* at 718–19.

The FTC again took action to address a patent holder's attempt to obtain injunctive relief in the face of a prior FRAND commitment in *Motorola Mobility LLC and Google, Inc.*[75] In that case, Motorola (later acquired by Google) held patents essential to practice standards promulgated by IEEE, ITU, and ETSI. Motorola participated in, and made FRAND commitments to, each of these SDOs. Nevertheless, in separate suits asserting these patents against Apple and Microsoft, Motorola sought exclusion orders at the ITC and injunctions in federal court to prevent future sales of standards-compliant products, even though both defendant implementers were allegedly willing to acquire licenses to Motorola's patents. The FTC asserted that Motorola's attempt to enjoin sales of Apple and Microsoft products using its standards-essential patents constituted an unfair method of competition in violation of Section 5.[76] The dispute was settled after Google agreed not to seek injunctive relief against an infringer of certain FRAND-committed patents unless the infringer was beyond the jurisdiction of the U.S. courts, stated in writing that it would not accept a license of the patent, refused to enter into a license agreement determined to meet the FRAND requirement by a court or arbitrator, or failed to provide written confirmation of an offer of a FRAND license.[77]

As discussed in Chapter 4, U.S. courts considering the issuance of an injunction must also consider the potential effect of the injunction on the public interest. While public interest considerations have not yet played a major role in the injunction analysis undertaken by courts adjudicating FRAND disputes, the public interest has played a large role in certain SEP-related proceedings before the U.S. International Trade Commission (ITC), an independent federal agency. Similar to a court's power to issue an injunction to prevent future infringement of a patent within the United States, the ITC has the authority to issue exclusion orders to prevent the importation of infringing products into the United States.[78] In considering whether to grant such an exclusion order, the ITC is required, among other things, to consider "the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers."[79] This requirement has generally been referred to as the ITC's "public interest" requirement.

In several recent cases, the ITC has considered requests for exclusion orders against products infringing one or more FRAND-committed SEPs. In 2013, the ITC issued an exclusion order prohibiting Apple from importing devices allegedly infringing certain Samsung FRAND-committed SEPs into the United States.[80] But

75 *In the Matter of Motorola Mobility LLC and Google Inc.* (FTC July 23, 2013) (Decision and Order).
76 *Id.* at 2–3.
77 *Id.* at 8.
78 Tariff Act of 1930, 19 U.S.C. § 1337(a)(1)(A).
79 *Id.* at § 1337(d)(1).
80 *In the Matter of Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers* (ITC June 4, 2013) (U.S.). Samsung could invoke an ITC proceeding because it has substantial operations in the United States. Apple was

in a surprising reversal, the U.S. Trade Representative (USTR) disapproved (vetoed) the ITC's exclusion order citing, among other things, the importance of standardized products to the U.S. economy.[81]

In 2013, the DOJ and the U.S. Patent and Trademark Office (PTO) issued a joint Policy Statement relating to the consideration of the public interest with respect to ITC exclusion orders. They state that "the remedy of an injunction or exclusion order may be inconsistent with the public interest … where an exclusion order based on a F/RAND-encumbered patent appears to be incompatible with the terms of a patent holder's existing F/RAND licensing commitment."[82] In this Policy Statement, the DOJ and PTO consider circumstances in which an injunction or exclusion order *may* be an appropriate remedy, including cases in which an implementer refuses to accept the FRAND license being offered, refuses to pay a reasonable royalty, refuses to engage in negotiation, or is not subject to the jurisdiction of a court that could award damages.

The FTC has reached similar conclusions regarding circumstances under which the public interest would, and would not, be served by the issuance of an ITC exclusion order against a product infringing a FRAND-committed SEP. In a written Statement to the ITC, the FTC reasoned that the ITC's public interest considerations "support denial of an exclusion order unless the holder of the RAND-encumbered SEP has made a reasonable royalty offer" that has not been accepted by the implementer.[83] The FTC has also suggested that the ITC consider ways to lessen the harmful impact of exclusion orders, for example, by delaying their effectiveness to give the infringer time to design around the asserted patent, and circumscribing the scope of exclusion orders to cover only infringing articles.

5.3.2 *European Union*

Much of the European Union's law regarding injunctions and SEPs stems from the CJEU's 2015 decision in *Huawei* v. *ZTE*.[84] *Huawei* establishes that in order to comply with EU competition law, a SEP holder that wishes to seek an injunction against an unlicensed implementer without committing an abuse of dominance under Article 102 of the TFEU must engage in a series of procedural steps including (i) alerting the unlicensed implementer of the infringement; and (ii) issuing an initial FRAND offer if the implementer manifests interest in the conclusion of a licensing agreement (these steps are described in greater detail below).

subject to an exclusion order against its products because they were manufactured in China and other countries.

81 Froman 2013.

82 DOJ & USPTO 2013, 6.

83 FTC 2012.

84 *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* (CJEU 2015) (EU). In addition to member states of the European Union, it is likely that the *Huawei* ruling would be followed in non-EU member states, such as Switzerland.

There is some disagreement among commentators regarding the circumstances under which *Huawei* applies. *Huawei* involved alleged conduct that is termed an "exclusionary" abuse under Article 102 of the TFEU. That is, the holder of a FRAND-pledged SEP seeks to "prevent products manufactured by competitors from appearing or remaining on the market and thereby reserve to itself the manufacture of the product in question."[85] In the view of some commentators who rely on the literal wording of the opinion, *Huawei* can only be read to encompass such exclusionary conduct,[86] and does not contemplate antitrust liability for so-called exploitative abuses (i.e., against firms that use injunctions on FRAND-pledged SEPs to extract unfair licensing terms, a problem often described as "patent holdup," as described in Chapter 7). Others, however, take the position that, because Article 102 of the TFEU deals with both exclusionary and exploitative abuses, there is no reason to assume that the CJEU in *Huawei* intended to limit its ruling to exclusionary abuses, a point that is important in the ongoing discussion of conduct by patent assertion entities (PAEs) that largely seek monetary remedies.[87]

There is also disagreement over the effect that *Huawei* seeks to achieve. Some argue that under *Huawei* the nature of a pledge to grant a license on FRAND terms is purely procedural. Under this interpretation, FRAND may be understood as a "comity device" that generates bilateral fair play obligations on patent holders and prospective licensees.[88] This understanding differs from the alternative interpretation of FRAND as imposing substantive limits on the royalty that may be charged.

1 *Huawei* v. *ZTE* – Procedure

The question whether and to what extent a FRAND undertaking given by a dominant SEP holder to an SDO limits its right to bring an action for prohibitory injunction (or for the recall of products) is clarified in *Huawei* v. *ZTE*. According to the CJEU the SEP holder is still able to seek an injunction, but "in order to prevent an action for a prohibitory injunction . . . from being regarded as abusive [under EU competition law], the [SEP holder] must comply with conditions which seek to ensure a fair balance between the interests concerned."[89] These conditions include the following:

i. The SEP holder is not allowed to bring such action against the implementer without prior notice to or prior consultation with the implementer, even if the SEP has already been used by the implementer.[90] The SEP holder's notification

[85] *Id.* at ¶ 52.
[86] Petit 2017, 301.
[87] *See* Contreras & Picht 2017 and Chapter 6.
[88] *See* CEN-CENELEC 2015.
[89] *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* (CJEU 2015, ¶ 55) (EU).
[90] *Id.* at ¶ 60.

should alert the implementer of the infringement by designating the SEP and specifying the way in which it has been infringed. This is because, owing to the large number of SEPs incorporated in some standards, it is not certain that an implementer will necessarily be aware that it is using a patent that is both valid and essential to the standard.[91]

ii. After the implementer has expressed its willingness to conclude a licensing agreement, it is for the SEP holder to present a specific, written offer for a license on FRAND terms, in accordance with the undertaking given to the SDO, specifying, in particular, the amount of the royalty and the way in which that royalty is to be calculated.[92]

iii. The implementer, in turn, must diligently respond to that offer, in accordance with recognized commercial practices in the field and in good faith. The required conduct must be established on the basis of objective factors and implies, in particular, that there are no delaying tactics. Should the implementer not accept the offer, it may rely on the abusive nature of an action for prohibitory injunction or for the recall of products only if it has submitted to the proprietor of the SEP in question, promptly and in writing, a specific counteroffer that corresponds to FRAND terms.[93] Furthermore, where the implementer is using the teachings of the SEP before a licensing agreement has been concluded, it must, from the point at which its counteroffer is rejected, provide appropriate security, for instance by providing a bank guarantee or by placing the amount necessary on deposit. The calculation of the security must include, inter alia, the number of the past acts of use of the SEP, and the alleged infringer must be able to render an account in respect of those acts of use.[94]

iv. Where no agreement is reached on the details of the FRAND terms following the counteroffer of the implementer, the parties may, by common agreement, request that the amount of the royalty be determined by an independent third party, by decision without delay.[95]

2 Cases Interpreting *Huawei* v. *ZTE*

The rules of conduct developed by the CJEU in *Huawei* v. *ZTE* were a response to the restrictive framework developed under the German *Orange-Book-Standard*[96] and *Standard-Spundfass*[97] cases. The *Huawei* framework, which offers an approach that better balances the interests of SEP holders and standards implementers, serves

91 *Id.* at ¶ 61–62.
92 *Id.* at ¶ 63.
93 *Id.* at ¶ 65–66.
94 *Id.* at ¶ 67.
95 *Id.* at ¶ 68.
96 BGH v. 6.5.2009 – KZR 39/06 – *Orange-Book-Standard* (Ger.).
97 BGH v. 13.7.2004 – KZR 40/02 – *Standard-Spundfass* (Ger.).

as general guidance for FRAND licensing negotiations. While the framework under *Huawei* appears procedural in nature, it also embodies important substantive concerns of EU competition law. The steps required by the parties under *Huawei*, as well as certain issues that require further clarification and that national courts (principally, but not exclusively, in Germany) are in the process of working out, are discussed below.

A) RESPONSE BY IMPLEMENTER. As regards the SEP holder's infringement notification, there are two issues of particular interest. First, German courts have considered the time limits within which the alleged infringer has to express its willingness to conclude a licensing agreement on FRAND terms.[98] The Düsseldorf District Court found in *Saint Lawrence* v. *Vodafone*[99] that the more details the infringement notification contains, the less time remains for the implementer to examine the patent(s) at issue and to express its willingness to conclude such an agreement. The findings of the lower court were confirmed by the Düsseldorf Higher Regional Court because the implementer, by waiting more than five months after the infringement notification was given, reacted belatedly and in an evasive manner.[100] In the case of *Saint Lawrence* v. *Deutsche Telekom* the Mannheim District Court held that there was no sufficient expression of willingness to conclude a licensing agreement on FRAND terms because the supplier of an implementer, acting as intervenor in the proceedings, needed more than three months to submit a license request after it became aware of the action for prohibitory injunction.[101] As the Düsseldorf District Court found in *Saint Lawrence* v. *Vodafone*, an infringement notification can be omitted if the implementer already disposes of all necessary information and lacks willingness to license.[102]

B) CONTENT OF INFRINGEMENT NOTIFICATION. As to the minimum content of the infringement notification, the Düsseldorf District Court found in the case of *Saint Lawrence* v. *Vodafone*[103] that the notification has to indicate at least the number of the patent, the contested embodiments, and the alleged acts of use performed by the implementer.[104] There is, however, no obligation to provide

98 *Cf.* LG Mannheim v. 27.11.2015 –12 O 106/14 – *Saint Lawrence* v. *Deutsche Telekom*, ¶ 214 (Ger.) (short time limit as a general rule because implementer must only have the opportunity to make first sight assessment, in particular since it remains possible to challenge the patents during the negotiations or even to reserve the right to do so after the conclusion of a license contract); LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone*, ¶ 218 (Ger.) (network operator needs to be given time for consulting with its suppliers); *Id.* at ¶ 216, 218 (information received from patentee, market position, experience of implementer ought to play a role).

99 LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone* (Ger.).

100 OLG Düsseldorf v. 9.5.2016 – I-15 U 36/16 – *Saint Lawrence* v. *Vodafone* (Ger.).

101 LG Mannheim v. 27.11.2015 – 2 O 106/14 – *Saint Lawrence* v. *Deutsche Telekom*, ¶¶ 146–49 (Ger.).

102 LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone*, ¶¶ 208–10 (Ger.).

103 *Id.*

104 *Id.* at ¶ 193.

additional information, in particular regarding the interpretation of the patent claims or on which part of the standard the patent reads.[105] Whether the infringement notification must indicate only the patent for which an injunction is sought or whether it must include reference to other IP rights with respect to which a license is offered was left undecided by the Düsseldorf District Court in *Sisvel* v. *Haier*.[106] The Mannheim District Court determined in *NTT DoCoMo* v. *HTC*,[107] as well as in *Philips* v. *Archos*,[108] that the SEP holder has to identify the (allegedly) infringed patent by reference to its patent number and by indicating that the patent-in-suit has been declared standard essential. Furthermore, the SEP holder is not only obliged to clarify the relevant standard but also to specify the pertinent part of the standard and the infringing element of the implementer's products in a way that enables the implementer to assess whether its use of the standard infringes on the patent-in-suit.[109] In this respect, the Mannheim District Court found in both *NTT DoCoMo* v. *HTC* and *Philips* v. *Archos* that presenting claim charts corresponding to recognized commercial practice for licensing negotiations is, in principle, an acceptable way to give notice of the alleged infringement.[110] On the other hand, a mere statement that the implementer infringed the patent-in-suit by producing or marketing products implementing the standard is not adequate.[111]

C) LICENSING OFFER. The third step under *Huawei* v. *ZTE* involves the SEP holder's making an offer that is FRAND.[112] In order to understand the relationship between the steps described by *Huawei*, reference can be made to the findings of the Düsseldorf Higher Regional Court in *Saint Lawrence* v. *Vodafone*.[113] According to this decision, the conduct of the parties required by the CJEU constitutes a mechanism of alternating, consecutive steps in which no subsequent conduct requirement is triggered unless the other party performed the previous "step." As

105 *Id.*
106 LG Düsseldorf v. 3.11.2015 – 4a O 93/14 – *Sisvel* v. *Haier* (Ger.).
107 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.).
108 LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos* (Ger.).
109 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.); *cf. also* LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos* (Ger.). It is worth noting that this obligation to specify is required by some SDO disclosure policies (e.g., IETF) and under consideration by additional SDOs.
110 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.); LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos*, ¶ IV.1. (Ger.).
111 LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos*, ¶ IV.1. (Ger.).
112 Some indication as to what comprises a FRAND offer is found in the EU Commission guidelines on horizontal cooperation agreements. European Commission, 2011 O.J. (C11/01) 1. The Commission specifies that fair and reasonable royalties should bear some relationship to the value of licensed IPRs. It suggests for example that the *ex ante* value of licensed IPRs, that is, the value prior to the industry being locked in to the given standard, should be considered. The Commission also proposes that centrality and essentiality of the portfolio of the licensed IPRs to the given standard should be considered. The guidelines also suggest that comparable licenses are taken into account. *Id.* at ¶¶ 289–90.
113 OLG Düsseldorf v. 9.5.2016 – I-15 U 36/16 – *Saint Lawrence v. Vodafone* (Ger.).

a consequence, the SEP holder was, in that case, not obliged to submit a FRAND licensing offer at all since the implementer failed to signal its willingness to license.[114]

Some decisions rendered by German courts subsequent to *Huawei* v. *ZTE* elaborate on the conditions under which the level of royalties, which must be set forth in the SEP holder's licensing offer, can be considered "reasonable." In this respect, two alternative approaches should be distinguished (see, generally, discussion of monetary remedies under FRAND obligations in Section 5.2.4, above). Under the first approach, it is for the courts to determine whether the royalties offered by the SEP holder qualify as FRAND. For instance, the Düsseldorf District Court found in *Saint Lawrence* v. *Vodafone* that a worldwide licensing offer covering a whole SEP pool, at a rate of $0.26 per infringing device, and that was otherwise consistent with the SEP holder's existing licensing practices, to be FRAND under *Huawei* v. *ZTE*.[115] The findings of the court of first instance were confirmed in the subsequent judgment of the Düsseldorf Higher Regional Court.[116]

Under the second approach, it is not the court's task to determine whether the licensing conditions and royalties are FRAND. On the contrary, the judges should only assess, based on a summary assessment, whether the SEP holder's licensing offer and royalties evidently violate the FRAND concept (i.e., the offer is not obviously not FRAND). In this case, the Mannheim District Court held that the licensing offer complied with the procedures outlined in *Huawei* v. *ZTE*,[117] in particular because the SEP holder had explained its calculation of the licensing fee based on the percentage of patents in the WCMA/SIPRO and VIA patent pools held by the SEP holder. Comparable findings were made by the Mannheim District Court in *Pioneer* v. *Acer*.[118] The standard of review applied by the Mannheim court was criticized in subsequent proceedings before the Karlsruhe Higher Regional Court, which held that courts must determine whether licensing offers are FRAND and cannot limit their scrutiny to a summary assessment of whether such offers are obviously not FRAND.[119] Taking into account the opinion of the court of second instance, the Mannheim District Court did not resolve in *Philips* v. *Archos*[120] whether it is obliged to reconsider its standard of review. Nevertheless, it found that the SEP proprietor did not sufficiently substantiate why royalties of $1.00 per unit should be FRAND according to *Huawei*.

[114] *Id.* at ¶ 2, b, cc.
[115] LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone*, ¶ 225 *et seq.* (Ger.); *cf.* LG Düsseldorf v. 31.3.2016 – 4a O 126/14 – *Saint Lawrence* v. *Vodafone*.
[116] OLG Düsseldorf v. 9.5.2016 – I-15 U 36/16 – *Saint Lawrence* v. *Vodafone*, ¶ 2.b.ff. (Ger.); *cf.* OLG Düsseldorf v. 9.5.2016 – I-15 U 35/16 – *Saint Lawrence* v. *Vodafone* (Ger.).
[117] LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC*, ¶ 70–72 (Ger.).
[118] LG Mannheim v. 8.1.2016 – 7 O 96/14 – *Pioneer* v. *Acer* (Ger.).
[119] OLG Karlsruhe v. 31.5.2016 – 6 U 55/16 – *Pioneer* v. *Acer* (Ger.).
[120] LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos*, ¶ IV.1. (Ger.).

D) CALCULATION OF ROYALTIES. Furthermore, the German decisions elucidate the extent to which a SEP holder must specify the calculation of royalties in its licensing offer under *Huawei*. In general, the offer must specify the relevant conditions in a way that, in order to conclude a licensing agreement, the implementer has merely to state its acceptance.[121] Accordingly, the Mannheim District Court ruled in both *NTT DoCoMo* v. *HTC*[122] and *Philips* v. *Archos*[123] that the calculation of the license fee must be explained in a manner that enables the implementer to understand, on the basis of objective criteria, why the SEP holder considers its licensing offer to be FRAND. In the case of a quota license agreement, it is not sufficient merely to indicate the royalties per unit. The respective amount must be made sufficiently "transparent," e.g., by reference to an established standard licensing program or by indicating other reference values, such as a pool license fee.[124] In contrast, the court deemed a licensing offer sufficient if the calculation of royalties is explained based on the percentage of patents in the WCMA/SIPRO and VIA patent pools held by the SEP holder.[125] The Düsseldorf District Court stated in *Saint Lawrence* v. *Vodafone* that the SEP holder has to provide the information necessary to determine the amount of royalties to be paid, e.g., the royalty per unit and the products covered by the license. While the court left undecided whether additional indications, e.g., concerning the FRAND character of the licensing offer, are necessary to comply with *Huawei*, it found that the SEP holder's duty to inform should not be interpreted too strictly as FRAND does regularly encompass a *range* of terms and conditions.[126]

E) PORTFOLIO LICENSES. Several decisions discuss whether a (worldwide) portfolio license offered by the SEP holder is FRAND according to *Huawei* v. *ZTE*. The Mannheim District Court seems to favor the FRAND compatibility of such licenses in *Saint Lawrence* v. *Deutsche Telekom*,[127] but at first it did not come to a clear conclusion. In its subsequent decision in *Pioneer* v. *Acer*,[128] however, an offer of the SEP holder was considered sufficient,[129] in particular because a worldwide license granted to the parent of a group corresponded to recognized commercial practice in the field. Correspondingly, the Düsseldorf District Court said in *Saint Lawrence* v. *Vodafone*[130] that the more licensing agreements implementing comparable terms the SEP holder has already concluded, the stronger the presumption that these

121 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.).
122 *Id.*
123 LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos* (Ger.).
124 *Id.* at ¶ IV, 1.
125 LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC*, ¶ 70–72 (Ger.).
126 LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone*, ¶ 256 *et seq.* (Ger.).
127 LG Mannheim v. 27.11.2015 – 2 O 106/14 – *Saint Lawrence* v. *Deutsche Telekom* (Ger.).
128 LG Mannheim v. 8.1.2016 – 7 O 96/14 – *Pioneer* v. *Acer* (Ger.).
129 For further details, *see id.* at ¶ 118–29.
130 LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone* (Ger.).

conditions are FRAND, unless factual reasons – which must be demonstrated by the implementer – justify modified terms. Recognized commercial practice in the relevant sector has to be considered when defining the admissible scope of the licensing agreement. The UK court in *Unwired Planet* v. *Huawei* also held that a license among global industry players should be worldwide, and that it was unreasonable for the potential licensee to insist on a United Kingdom-only license in this context.[131] Based on these cases, it appears that if patent portfolios are usually covered by group or worldwide licenses in the relevant market, a (worldwide) portfolio license will be FRAND for purposes of EU competition law unless the circumstances of the specific case, e.g., the SEP holders' or the implementer's market activity being limited to one geographic market, require a modification.

F) RESPONSE BY IMPLEMENTER – TIMING AND CONTENT. The German courts have also shed some light on the way an implementer ought to react to the SEP holder's licensing offer. In particular, the courts discuss whether there is an obligation of the implementer to respond to a licensing offer that is not FRAND. While the Düsseldorf District Court confirmed such an obligation at first in *Sisvel* v. *Haier*[132] and left this issue undecided in *Saint Lawrence* v. *Vodafone*,[133] the Düsseldorf Higher Regional Court explicitly denied in *NTT DoCoMo* v. *HTC*[134] that there is an obligation to respond if the SEP holder refrained from submitting a FRAND licensing offer. The question of whether the implementer may respond to a non-FRAND offer in a different manner than by submitting a specific counteroffer, in particular by merely demonstrating that the SEP holder's offer was not FRAND, remained unanswered.[135] In contrast, the Mannheim District Court found, in *NTT DoCoMo* v. *HTC*,[136] as well as *Saint Lawrence* v. *Deutsche Telekom*,[137] that even if the preceding licensing offer is not (fully) in compliance with FRAND, the implementer would still be under a duty to react diligently and to submit a corresponding FRAND counteroffer. In order to trigger the counteroffer obligation it is sufficient that the licensing offer contains all information, in particular regarding royalty calculation, which is necessary for the implementer to submit a counteroffer corresponding to FRAND terms.[138] Even though the Mannheim District Court recently reaffirmed, in *Philips* v. *Archos*,[139] the general findings of its previous decisions, it

[131] *Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK). *See also Conversant Wireless Licensing SARL* v. *Huawei Technologies Co. Ltd & Ors* [2018] EWHC 808 (Pat), relying on *Unwired Planet* in holding that the English courts have jurisdiction to determine a global FRAND license.

[132] LG Düsseldorf v. 3.11.2015 – 4a O 93/14 – *Sisvel* v. *Haier* (Ger.).

[133] LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone* (Ger.).

[134] OLG Düsseldorf v. 13.1.2016 – I-15 U 66/15 – *Sisvel* v. *Haier* (Ger.).

[135] LG Düsseldorf v. 3.11.2015 – 4a O 93/14 – *Sisvel* v. *Haier*, ¶¶ 98–101 (Ger.).

[136] LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.).

[137] LG Mannheim v. 27.11.2015 – 2 O 106/14 – *Saint Lawrence* v. *Deutsche Telekom* (Ger.).

[138] *Id.*

[139] LG Mannheim v. 1.7.2016 – 7 O 209/15 – *Philips* v. *Archos* (Ger.).

specified that an exception applies where it is established in the course of a summary examination that the licensing offer is evidently not FRAND and therefore constitutes an abuse of dominance.

As to the time limits for an adequate reaction of the implementer: In a more general manner, the Mannheim District Court held in *Philips* v. *Archos*[140] that the period of time in which the implementer has to react depends on the facts of the case as well as on the principles of good faith and recognized commercial practice.[141] More specifically, the same court found in *NTT DoCoMo* v. *HTC*[142] that the behavior of the implementer is considered insufficient if the counteroffer is made only one and a half years after receiving the licensing offer and half a year after the SEP holder filed suit.

Furthermore, the courts analyzed under which conditions a counteroffer meets the requirements of *Huawei* in terms of content. In the case of *Saint Lawrence* v. *Deutsche Telekom* the Mannheim District Court denied the existence of a specific counteroffer because the royalty was not specified in the document itself but was intended to be determined by an independent third party. Whether the limitation of the counteroffer to Germany was in compliance with FRAND terms remained undecided.[143] However, in *Saint Lawrence* v. *Vodafone* the Düsseldorf District Court decided that none of the counteroffers of the intervenor were FRAND in terms of content. They were either inadmissibly limited to Germany, contained no precise royalty, were not submitted "promptly" because the standard user had waited until the oral pleadings in the parallel procedure, or they proposed royalties per device that the court considered as too low.[144] Correspondingly, the Mannheim District Court denied in *Pioneer* v. *Acer* the FRAND conformity of an implementer's offer because the intended limitation of the license to Germany would have been inappropriate given the facts of the case and recognized commercial practice in the respective market.[145]

3 Other European Law Principles

In addition to the EU procedural requirements under *Huawei* that are described above, national law may be implicated when a SEP holder seeks an injunction for a FRAND-committed SEP. For example, Polish law would analyze the seeking of injunctive relief by patentees who made prior FRAND commitments under an abuse of rights doctrine independent of EU competition law. This doctrine provides

[140] *Id.*
[141] *Id.* at ¶ IV.1.
[142] LG Mannheim v. 29.1.2016 – 7 O 66/15 – *NTT DoCoMo* v. *HTC* (Ger.).
[143] LG Mannheim v. 27.11.2015 – 2 O 106/14 – *Saint Lawrence* v. *Deutsche Telekom*, ¶¶ 158–64 (Ger.).
[144] LG Düsseldorf v. 31.3.2016 – 4a O 73/14 – *Saint Lawrence* v. *Vodafone*, ¶ 291 *et seq.* (Ger.).
[145] LG Mannheim v. 8.1.2016 – 7 O 96/14 – *Pioneer* v. *Acer*, ¶¶ 131–33 (Ger.).

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a general defense based on the provisions of the Polish Civil Code,[146] which can be applied to abuses of all types of private rights,[147] including patents. This analysis would likely look to arguments such as reliance on FRAND promises made by SEP holders during the standard-setting process, an obligation to act in good faith toward other parties operating in the market.[148] Polish law would rather approach all types of FRAND pledges in a similar manner, whether they are made within or outside the standard-setting context. Implementers would base their defenses against injunctions on breaches of reliance, loyalty, or good faith.

The reasoning behind denying injunctions on the basis of the abuse of rights doctrine is supported by equitable arguments rather than economic factors or patent law – particularly the ability of the patent system to stimulate investment in innovation. The abuse defense would likely be effective only if raised by an implementer acting in good faith – a willing implementer.

4 Injunctions and Alternative Dispute Resolution in Europe

Despite its potential benefits, the procedural framework introduced by *Huawei* has not solved all the practical challenges and difficulties that can arise in FRAND disputes. For example, *Huawei* fails to offer a solution to the territorial fragmentation of FRAND disputes or to the proliferation of parallel local court proceedings. The continuing conduct of multiple parallel proceedings is not cost efficient or time efficient, in spite of the fact that many if not all FRAND disputes are global (and would ideally materialize in global FRAND licensing transactions as noted above).[149] Numerous complex jurisdictional issues arise in this context, including the risk that courts will engage in a "race to the bottom" in order to present an attractive venue for FRAND litigation, and parties will engage in a "race to the courthouse" to ensure that their case is heard in the most favorable jurisdiction.[150] As a result, it is important to (continue to) explore means for rationalizing remedies offered both by courts and alternative dispute resolution (ADR) mechanisms in this area.[151]

[146] Kodeks cywilny [Civil Code], art. 5 (1964 r. Dz. U. Nr. 16 poz. 93 with amendments) (Pol.).
[147] Gutowski 2016, 50.
[148] Sikorski 2015, 460.
[149] The UK court in *Unwired Planet Int'l Ltd.* v. *Huawei Techs. Co.* (Pat 2017) (UK) makes this observation explicitly, observing that a licensor and licensee acting reasonably in markets such as telecommunication equipment would agree on a worldwide license. *Id.* at ¶ 544. *See also* Contreras 2017b, 11–14 (discussing global implications of case).
[150] Contreras 2017b.
[151] *See* the policy proposals for an arbitration system formulated in the Geneva Internet Disputes Resolution Policies 1.0 project, University of Geneva 2015; for a discussion about the use of arbitration for FRAND disputes, *see* Contreras & Newman 2014; Carter 2014; De Werra 2014. In fact, several global ADR service providers, including the Geneva-based WIPO Arbitration and Mediation Center, have already developed tailored rules for FRAND disputes. WIPO 2017.

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5.3.3 *Korea*

Unlike the United States, in which injunctions are granted under principles of equity, patentees in Korea are entitled to an injunction automatically in case of patent infringement.[152] Only in exceptional cases where patentees are regarded as having abused their rights, courts will deny an injunction.[153] Thus, the question is whether such abuse is likely to be found when a SEP holder has violated its FRAND commitment.

In *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.*, the Seoul Central District Court held that it is an abuse of patent rights for a SEP holder to seek an injunction under a FRAND-committed patent if the SEP holder has violated its duty to negotiate in good faith with the implementer and tries to maintain its dominance over the market contrary to the policy goals of the patent law.[154] This duty to negotiate in good faith includes a duty to offer any potential licensees a FRAND license with FRAND terms. Korean courts have held, however, that a SEP holder does not have a duty to disclose detailed information about comparable licenses with third parties.

SEP holders in Korea have a duty to negotiate in good faith with a party willing to obtain a license under FRAND terms.[155] Yet, as discussed above in the context of "holdout," a good faith negotiation is impossible when a potential licensee has no intention of obtaining a FRAND license at all. It is reasonable to consider a willing licensee to be a potential licensee that engages in licensing negotiations and proposes a specific royalty rate with a reasonable calculation basis. In *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.*, the Seoul Central District Court held that the potential licensee does not have to deposit royalties in advance to be qualified as a willing licensee.[156] Moreover, the court found that there was a large gap between royalty rate proposals made by Samsung and Apple and, also, that there were no serious and intensive licensing negotiations in good faith between them.[157] When both parties were to blame for the lack of a good faith negotiation, the court concluded that it was difficult to see any abuse of patent rights on the part of the SEP holder in seeking an injunction.[158] This shows the difficulty of proving abuse of a patent right in Korea.

5.3.4 *Japan*

Article 100(1) of the Japanese Patent Act states: "A patentee or exclusive licensee may demand a person who infringes or is likely to infringe the patent right or exclusive

[152] *See* Patent Act, Act No. 14691, art. 126 (Kor.); *LG Electronics, Inc.* v. *Daewoo Electronics, Inc.* (S. Ct. 2012) (Kor.).
[153] *See LG Electronics, Inc.* v. *Daewoo Electronics, Inc.* (S. Ct. 2012) (Kor.).
[154] *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.* (Dist. Ct. 2012) (Kor.).
[155] *Id.*
[156] *Id.*
[157] *Id.*
[158] *Id.*

license to stop or prevent such infringement."[159] Under this Article, Japanese courts award injunctions almost automatically when they find a likelihood of patent infringement. The abuse of rights doctrine, which is stipulated in Article 1(3) of the Civil Code of Japan,[160] is theoretically applicable to the exercise of patent rights. But in patent infringement cases, courts have rarely applied this doctrine. The IP High Court reversed this trend in *Samsung* v. *Apple Japan*.[161]

In *Samsung* v. *Apple Japan*, Samsung accused Apple of infringing Samsung's SEPs in the ETSI UMTS standard.[162] According to the IP High Court, implementers wishing to manufacture a product compliant with the UMTS standard have no choice but to practice the SEPs, as "it is impossible for them to adopt alternative technology or to change the product design."[163] "Therefore, if the patentee is unconditionally allowed to exercise the right to seek an injunction based on the [SEPs, the implementers] may be put into a situation where they are forced to pay a high royalty or agree to extremely unfavorable license conditions that are not FRAND Terms, or to abandon the business project itself, so as to avoid the damage that may arise from such injunction."[164] The court also observed that "the UMTS standard contains a large number of patents owned by different owners (1800 or more patent families declared essential by 50 or more patentees)."[165] It is difficult for an implementer to obtain licenses to such a large number of patents in advance, after confirming whether each of such patents is essential or not.[166] As the court explained:

> [I]f the patentee is unconditionally allowed to seek an injunction based on the [SEPs], the use of the UMTS standard would become practically impossible. [This] situation would have a negative impact on the dissemination of the UMTS standard and run counter to the purpose of the ETSI IPR Policy . . . Further, if such situation arises, the general public would be unable to enjoy a variety of benefits that would be available if the harmonization and dissemination of communication standards was achieved.[167]

Therefore, the court reasoned that in relation to a SEP, it is not appropriate to allow a party that made a FRAND declaration to seek an injunction based on the SEP against an implementer willing to obtain a license on FRAND Terms.[168]

The court went on to reason that an injunction "should be allowed against an implementer engaged in manufacturing, sales, etc. of a . . . standard-compliant

159 Tokkyo-hō [Patent Act], No. 121 of 1959, art. 100(1) (Japan).
160 Minpō [Civ. C.] art. 1(3) (Japan) ("No abuse of rights is permitted.").
161 *Samsung Elecs. Co.* v. *Apple Japan LLC* (IP High Ct. 2014) (Japan) (FRAND II).
162 *Id.* at 2.
163 *Id.* at 24.
164 *Id.*
165 *Id.*
166 *Id.*
167 *Id.* at 24–25.
168 *Id.* at 25.

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product without any intention of obtaining a FRAND license,"[169] as such implementer cannot be considered to be complying with its own end of the FRAND bargain, and the patentee would not be adequately protected if its ability to seek an injunction even against such parties is restricted.[170] Nevertheless, because allowing a SEP holder to seek an injunction involves potential adverse effects, the court must carefully consider whether the prospective licensee had no intention of entering into a FRAND license.[171]

On this basis, the court concluded that the exercise of the right to seek an injunction based on a SEP by a SEP holder who made a FRAND commitment would constitute abuse of right (Article 1(3) of the Civil Code) and therefore is not allowed, if the implementer successfully alleges and proves that the SEP holder made the FRAND commitment and the implementer intended to receive it.[172] As to the specific case at hand, the court found that Apple intended to receive a FRAND license, and denied Samsung's claim for injunction.[173]

5.3.5 *China*

Courts in China have recently considered injunctions in two cases involving FRAND-committed SEPs. In *Iwncomm* v. *Sony*,[174] the Beijing IP court issued an injunction against the implementer Sony for the infringement of a FRAND-committed SEP covering the Chinese WAPI wireless networking standard; and the Shenzhen Intermediate People's Court issued an injunction for the infringement of two FRAND-committed patents essential to the 4G standard in *Huawei v. Samsung*.[175] In both cases, the courts concluded that the patentee had been a willing licensor and the infringer an unwilling licensee.

In addition to these cases, two Chinese courts have recently released guidance regarding disputes relating to SEPs disclosed in recommended national, industrial, or local standards. In the *Interpretations (II) of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases* art. 24 (effective as of April 1, 2016), the Supreme People's Court of the People's Republic of China states that courts should not award injunctive relief when a SEP owner deliberately fails to comply with its obligation to grant a FRAND license to a manufacturer, and the manufacturer is not clearly at fault. Chinese

[169] *Id.*
[170] *Id.*
[171] *Id.*
[172] *Id.*
[173] *Id.* at 27.
[174] *Xian Xidian Jietong Wireless Commc'n Co., Ltd. (Iwncomm)* v. *SONY Mobile Commc'n Prods. (China) Co. Ltd.* (Beijing IP Ct. Mar. 22, 2017).
[175] For further discussion of *Iwncomm*, see Bharadwaj & Verma 2017. As of this writing, an English-language translation of the January 2018 *Huawei* v. *Samsung* decision is not available, but a summary of the court's reasoning can be found in Schindler 2018.

courts recently have begun to address how fault on the part of either the patentee or the prospective licensee impacts the availability of injunctive relief in FRAND cases.[176]

5.3.6 *Discussion and Analysis: FRAND and Injunctions*

U.S. courts have analyzed the question whether the holder of a FRAND-committed SEP may seek to enjoin unlicensed implementers from practicing the SEP under the *eBay* framework, focusing primarily on whether the FRAND commitment implies that the SEP holder has conceded that it will accept monetary damages in lieu of the exclusionary remedy of an injunction and thereby suffer no "irreparable harm" if an injunction is not issued. In addition, appeals to the fourth *eBay* prong have caused some to consider the public interest associated with the exclusion of standardized products from the market, as the USTR did in rejecting the ITC's exclusion order against Apple in 2013 (see Section 5.3.1 above). The U.S. FTC has also asserted that SEP holders' attempts to enjoin "willing" licensees (as variously defined) may violate the FTC Act and antitrust laws. In the FTC's settlement with Google and Motorola, a detailed procedure involving several negotiation stages was established before Google/Motorola was permitted to seek an injunction against a SEP implementer.

In jurisdictions, such as Germany and Korea, in which injunctions issue more or less automatically, recourse is more likely to be made to competition law.[177] Additionally in the European Union, the EU competition law, which benefits from the principles of direct effect and supremacy over EU member states' laws, is also perhaps more attractive as a tool for patent litigants than the national patent laws of the EU member states (though this distinction may be lessened in view of the EU Enforcement Directive).[178] Rather than focusing primarily on the content of a FRAND commitment, the CJEU's decision in *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* established detailed procedural requirements for both SEP holders and implementers when a SEP holder seeks an injunction. When the procedure is not followed by the SEP holder, it is vulnerable to claims of abuse of dominance under Article 102 of the TFEU. When the *Huawei* procedure is followed by both parties, the result is either an agreement between the parties or an adjudicated or arbitrated FRAND royalty determination that the implementer must honor, lest an injunction be issued. And if the *Huawei* procedure is followed by the SEP holder but not by the implementer, the SEP holder may seek and obtain an injunction without

[176] *See* Cui 2018 (summarizing recent Chinese court cases and guidelines); Guangdong High People's Court 2018; Beijing High People's Court 2017, ¶¶ 149–53.
[177] *See* Chapter 6.
[178] *See* Chapter 1.

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violating Article 102 of the TFEU. The *Huawei* procedure is apparently not simple for implementers to follow, as several post-*Huawei* cases have resulted in injunctions after an implementer failed to comply with some element of the procedure such as making a valid counteroffer or posting bond in the amount of the estimated royalty. As such, it is possible that the procedure in *Huawei* is over-specified and perhaps rewards litigation experience and procedural savvy rather than a genuine desire to enter into license transactions. On the other hand, the post-*Huawei* cases may reveal the occurrence of intentional holdout at higher rates than expected.

As noted by Advocate General Wathelet in his opinion in *Huawei*,[179] the matters in dispute "could adequately – if not better – be resolved in the context of other branches of law or by mechanisms other than the rules of competition law." What the Advocate General means by other branches of law is unclear. But one might assume that he has in mind general defenses – such as abuse of rights – and possibly the application of patent remedies itself. If the disputes over injunctions for FRAND-pledged patents could be resolved within the law on patent remedies then Directive 2004/48/EC on IPR enforcement would provide arguments against granting injunctions to holders of FRAND-pledged patents, on the general principles discussed in Chapter 4. First, proportionality as a general principle governing remedies could be used. Proportionality – as the directive provides (and as discussed in Chapter 4) – requires that remedies be applied in a fair and equitable manner and that there are safeguards against abuse in place. Second, the directive also explains that in the application of remedies circumstances of the case need to be considered and the nature of an IP right should be taken into account.

The standard for proving abusive conduct in Japan, as described in *Samsung* v. *Apple Japan*, appears to be much more straightforward, involving only the stated (or proven) willingness of the implementer to accept a license of the asserted SEPs. The courts in Korea may have split the difference between the formalistic EU approach and the relatively unspecified Japanese approach, holding in *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.* that abusive conduct will not be found if the parties engage in good faith negotiation of a FRAND license. In order to be found to have acted in good faith, an implementer need only show that it engaged in licensing negotiations and proposed a specific royalty rate with a reasonable calculation basis. But if a failure of negotiation is attributable to the action or inaction of both parties, an abuse by the SEP holder will not be found when it obtains an injunction against the implementer.

In our view, each of these approaches can profitably be informed by the other. To observers from the United States and other common law jurisdictions,

[179] *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* (CJEU 2014, ¶ 9) (EU).

the fact that in the European Union and other civil law jurisdictions injunctions typically issue automatically in patent cases, subject only to the violation of competition law, seems unusual. Patent law has developed independently of competition law and the abuse of rights doctrine, and it seems reasonable for patent remedies to be governed by an internally consistent and cohesive framework independent of other external legal regimes (particularly regimes that are imposed by extra-national authority such as the European Union). As such, we recommend that courts consider imposing reasonable conditions on the issuance of injunctive relief, such as are discussed in Chapter 4, even absent a violation of competition law. Because the issuance of injunctive relief is typically a binary decision (either an injunction is issued or not),[180] the types of moderation and proportionality that are available to adjust monetary damages for the parties' behavior is typically not available in the injunctive arena. Instead, some measure of judicial discretion in the *granting* of injunctive relief could more accurately fit this remedy to the actions and behavior of the parties. This is not to say that civil law jurisdictions should adopt an *eBay*-style equitable analysis for the assessment of injunctive remedies, or refuse injunctions at the rates seen in U.S. courts, but only that some measure of judicial discretion be exercised.[181] Our discussion as to how that discretion should be exercised is found in Chapter 4.

On the other hand, the equitable analysis of party behavior in the context of SEPs and FRAND under U.S. law still suffers from a lack of precision and definition. The Federal Circuit in *Apple, Inc.* v. *Samsung Elecs. Co., Ltd.* offers a three-way split opinion regarding the presumptions and conduct that should inform the decision to grant injunctive relief. Parties thus lack clear guidance in this critical area. U.S. courts analyzing injunction availability in SEP cases have focused largely on the prongs of the *eBay* test pertaining to irreparable harm and adequacy of monetary damages. We recommend that when balancing equities between the parties, courts start with the procedures modeling well-functioning party behavior as laid out by the CJEU in *Huawei Techs. Co. Ltd.* v. *ZTE Corp.* or under the law of Japan or Korea. While each of these procedural analyses was developed with potential violations of competition law or obligations of parties entering into a contract to negotiate in good faith in mind, at their root they are each intended to model a well-functioning bilateral relationship within the standard-setting context. As such, a full and fair assessment of the appropriateness of equitable relief would do well to consider such factors.

180 *But see* the discussion of tailored injunctions in Chapter 4.

181 As noted above, the EU Enforcement Directive requires that remedies be applied in a fair and equitable manner, thus introducing an element of "equity" even into the EU analysis. *See* Directive 2004/48/EC.

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APPENDIX – NATIONAL LAW CONSIDERATIONS FOR MONETARY FRAND DAMAGES

A. *Germany*

Under § 139 of the German Patent Law (PatG), a patent owner may recover monetary damages from an infringer that intentionally or negligently makes use of the respective patent in the sense of §§ 9, 10 PatG.[182] In order to determine the specific amount of monetary damages to be paid by the infringer, the patent owner can select between three different calculation methods pursuant to § 139(2) PatG. These ways of calculating damages can, however, neither be aggregated nor mixed.[183]

The first calculation approach, pursuant to § 139(2) PatG in conjunction with §§ 249, 252 of the German Civil Code (BGB), refers to the "difference in wealth" of the patent owner caused by the infringement ("Differenzmethode").[184] In order to be compensated, the patent owner has to show a financial loss and causality between this loss and the infringement.[185] If the action seeks to recover lost profits, it is for the patent owner to prove that it could have obtained the amount of profits claimed in the absence of the infringing activity.[186]

The second calculation method, laid down by the third sentence of § 139(2) PatG, often called the "objective calculation of damages" and being widely used in practice,[187] refers to the reasonable royalties that could be obtained from a third person for the use of the patent.[188] The approach is based on the assumption that the infringer should compensate for the pecuniary benefits it obtained from using the patent-in-suit. The precise calculation should follow the hypothetical contractual terms that would have been agreed upon by reasonable parties taking into account all relevant factors for the determination of the patent value, such as a potential monopolistic position of the patent owner, the economic importance of the patent, customary royalties, royalties already agreed upon, or standardized licensing agreements.[189]

The third approach, formulated in the second sentence of § 139(2) PatG, concerns the recovery of the infringer's profits. Since it is only a calculation method and not a stand-alone claim, it must be proven that the patent owner incurred actual

182 Mes 2015, § 139 rec. 6, 121; *cf.* Benkard 2015, § 139 rec. 13 et seq.; Keukenschrijver 2016, § 139 rec. 97.
183 Benkard 2015, § 139 rec. 61; Mes 2015, § 139 rec. 123, 177; Keukenschrijver 2016, § 139 rec. 140; LG Düsseldorf v. 19.1.2016 – 4b O 120/14 – *Unwired Planet* v. *Samsung*, ¶ VII.6.b.cc (Ger.).
184 LG Düsseldorf v. 19.1.2016 – 4b O 120/14 – *Unwired Planet* v. *Samsung*, ¶ VII.6.b.cc (Ger.).
185 Mes 2015, § 139 rec. 123; Keukenschrijver 2016, § 139 rec. 154; Benkard 2015, § 139 rec. 57 et seq.
186 Keukenschrijver 2016, § 139 rec. 156.
187 *Id.* at § 139 rec. 138.
188 Mes 2015, § 139 rec. 123; Benkard 2015, § 139 rec. 61.
189 Mes 2015, § 139 rec. 131 et seq., 134; Benkard 2015, § 139 rec. 66; Keukenschrijver 2016, § 139 rec. 164. This calculation methodology bears some resemblance to the *Georgia-Pacific* framework used in the United States.

losses.[190] Furthermore, the owner can claim only those profits that effectively resulted from the patent infringement.[191] As a general rule, the profits are calculated by subtracting the costs related to the patent infringement from the revenues of the infringer.[192] However, according to the German Federal Court (BGH) the infringer is not allowed to deduct any fixed costs together with the production costs that are directly related to the manufacturing of the infringing product.[193] Fixed costs can only be considered if they are *exclusively* related to the infringement.[194] Other costs ("business-as-usual-costs") that occur irrespective of the volume of production and supply as a consequence of the general business activity of the infringer are not relevant. The necessary evidence has to be provided by the infringer.[195]

Irrespective of the calculation method, courts are permitted to estimate the damages to be paid pursuant to § 287 of the German Code of Civil Procedure (ZPO) if the patent owner is not able to substantiate its financial losses.[196] As a consequence, damages can be related to the royalties under a FRAND license, in particular where the patent owner selects the "license analogy method" instead of other available calculation methods. However, the patent owner is not prevented from claiming further damages exceeding FRAND royalties, under the condition that they correspond to the enrichment of the infringer.[197]

Important aspects of the relation between the level of royalties under a FRAND license and monetary damages for patent infringement were illustrated by the Düsseldorf District Court in *Unwired Planet* v. *Samsung*.[198] As noted above, the *Huawei* obligations do not hinder a SEP holder from bringing an action for damages against an implementer and it can freely choose between said calculations methods.[199] However, the CJEU requirements indirectly influence the extent to which compensation for past acts of infringement can be sought. If the implementer, having demonstrated its willingness to take a license, is able to raise a counterclaim according to § 33 of the German Competition Act (GWB), in conjunction with Article 102 of the TFEU, because the SEP proprietor, having made a FRAND declaration for the patent-in-suit, abusively refused to grant a license, monetary damages can be limited to the maximum amount of FRAND royalties for the period after the refusal.[200] In *Unwired Planet*, no such cap on damages applied, because the standard implementer did not express his readiness to conclude a licensing

190 Mes 2015, § 139 rec. 146.
191 *Id.* at § 139 rec. 163.
192 Benkard 2015, § 139 rec. 73.
193 Mes 2015, § 139 rec. 148; Benkard 2015, § 139 rec. 73b.
194 Benkard 2015, § 139 rec. 73c.
195 *Id.* at § 139 rec. 73g.
196 *Id.* at § 139 rec. 60.
197 *Id.* at § 139 rec. 63a.
198 LG Düsseldorf v. 19.1.2016 – 4b O 120/14 – *Unwired Planet* v. *Samsung* (Ger.).
199 *Id.* at ¶ VII.6.b.bb.
200 *Id.* at ¶ VII.6.b.dd.

agreement.[201] In contrast to actions for injunction, abusive behavior of the SEP holder will not be assumed if it fails to provide an infringement notification.[202]

B. Switzerland

1 Legal Status of FRAND Commitments under Swiss Law

A Swiss court deciding the issue of damages for FRAND-committed SEPs will first have to assess the legal nature of the FRAND commitment that is made by the SEP holder to the relevant SSO under the applicable contract law that governs such commitment. By way of illustration, the ETSI IPR Policy[203] provides a FRAND commitment by which the owners of standard-essential patents[204] commit to make their patents available to willing licensees under FRAND terms.[205] Section 6.1 of the ETSI IPR Policy provides that "[w]hen an ESSENTIAL IPR[[206]] relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory ("FRAND") terms and conditions under such IPR .. . . " Appendix A to the ETSI IPR Policy (entitled "IPR Licensing Declaration Forms")[207] contains different forms[208] to be completed and signed by the owner of the relevant IP rights under which such IP owner is invited to make a formal and binding statement according to which "it and its AFFILIATES are prepared to grant irrevocable licenses under its/their IPR(s) on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy . . . "[209]

[201] *Id.* at ¶ VII.6.b.ee.
[202] *Id.* at ¶ VII.6.b.dd.
[203] ETSI 2018, Annex 6; *see also* the webpage dedicated to IPR: ETSI, *Intellectual Property Rights* (last visited Apr. 30, 2018).
[204] Essential patents are defined in ETSI 2018, Annex 6 § 15.6 ("'ESSENTIAL' as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.").
[205] *Id.* at Annex 6 § 6.1.
[206] Each of the capitalized terms is defined in *id.* at Annex 6 § 15.
[207] *Id.* at Annex 6 app. A.
[208] A "General IPR Licensing Declaration" and an "IPR Information Statement and Licensing Declaration." *Id.*
[209] The relevant portions of the "General IPR Licensing Declaration" include: "it and its AFFILIATES are prepared to grant irrevocable licenses under its/their IPR(s) on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy, in respect of the STANDARD(S), TECHNICAL SPECIFICATION(S), or the ETSI Project(s), as identified above, to the extent that the IPR(s) are or become, and remain ESSENTIAL to practice that/those STANDARD(S) or

These documents provide that their "construction, validity and performance ... shall be governed by the laws of France."[210] The legal issue is consequently to analyze the nature and the enforceability of the commitments ("undertaking")[211] that are made by the owners of the relevant SEPs to the SSOs under the applicable governing law.

By stating that the owners of SEPs are "prepared to grant irrevocable licenses"[212] under their SEPs to third party implementers (in their formal undertaking that they make to the SSOs), the issue is whether third party beneficiaries can request the performance of such obligation, which in turn depends on whether these potential licensees (which have not directly entered into any contract with the owner of the relevant SEPs) can be considered as third party beneficiaries. This issue, which obviously depends on the interpretation of the relevant declaration under the applicable law, remains disputed,[213] it being noted that granting – by contract – rights to a third party is generally admitted from a transnational perspective.[214] Under French law, which is of particular relevance here (given that it is the law that governs the ETSI Declarations), the view has been expressed that the commitments made by owners of SEPs under the ETSI Declarations can qualify as "stipulation pour autrui" within the meaning of Article 1121 of the French Civil Code.[215]

Assuming that willing licensees (implementers of the technology standards covered by the SEPs) could be considered third party beneficiaries of these commitments under the relevant law, the next issue would be to define precisely the legal nature and the scope of the commitments made by the owners of SEPs: i.e., what is the contractual obligation that the owners of SEPs have accepted to perform for the benefit of the potential licensees and that such licensees could directly enforce as

TECHNICAL SPECIFICATION(S) or, as applicable, any STANDARD or TECHNICAL SPECIFICATION resulting from proposals or Work Items within the current scope of the above identified ETSI Project(s), for the field of use of practice of such STANDARD or TECHNICAL SPECIFICATION ... "; similarly, the "IPR Information Statement and Licensing Declaration" includes: "To the extent that the IPR(s) disclosed in the attached *IPR Information Statement Annex* are or become, and remain ESSENTIAL in respect of the ETSI Work Item, STANDARD and/or TECHNICAL SPECIFICATION identified in the attached *IPR Information Statement Annex*, the Declarant and/or its AFFILIATES are (1) prepared to grant irrevocable licenses under this/these IPR(s) on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy ... " *Id.*

210 *Id.*

211 *Id.* (describing the grant of a license as an "undertaking").

212 *Id.*

213 For a contractual analysis of FRAND commitments, *see* Straus 2011; Brooks & Geradin 2010; for the opposite view (considering that (common law) contract theory does not constitute the proper legal basis for analyzing FRAND), *see* Contreras 2015c.

214 *See, e.g.*, Unidroit 2016, art. 5.2.1 (contracts in favor of third parties): "(1) The parties (the 'promisor' and the 'promisee') may confer by express or implied agreement a right on a third party (the 'beneficiary'). (2) The existence and content of the beneficiary's right against the promisor are determined by the agreement of the parties and are subject to any conditions or other limitations under the agreement."

215 *See* Straus 2011; Caron 2013, 1008 et seq.

third party beneficiaries? The specificity and the difficulty of this analysis results from the finding that the relevant obligation does not consist of a straightforward – i.e., easy to identify and thus to enforce – contractual obligation.[216] Quite to the contrary, the owners of SEPs commit to be prepared to license out their patents to third party licensees on FRAND terms and conditions, whereby there remains considerable room as to what shall constitute FRAND terms and conditions.[217]

Under Swiss law (assuming that it would apply), the commitment could be considered as an "agreement to conclude a contract" within the meaning of Article 22¶ 1 of the Swiss Code of Obligations (SCO), which provides that "[p]arties may reach a binding agreement to enter into a contract at a later date." Pursuant to this provision, one contracting party can promise to its contracting party that it shall enter into a contract with a third party, so that such third party can subsequently request the performance of this obligation (as a third party beneficiary), i.e., it can request that the contract shall be entered into or claim damages for breach of such obligation.[218] The validity of such a preliminary contract (i.e., the contract by which one party agrees to enter into another future contract) depends on whether the object of the contract is determined or is at least determinable.[219]

From this perspective, the enforceability of the obligation against an owner of SEPs (to execute a license agreement with a third party licensee) will depend on whether such obligation is sufficiently determinable in order to qualify as a valid contractual obligation, the performance of which could be requested and enforced.

If a Swiss court considers that (as a result of its interpretation of the FRAND commitment on the basis of the law that shall govern it) the FRAND commitment constitutes a binding obligation that could be enforced by an implementer against the patent owner and that would further prevent the patent owner from initiating any patent infringement litigation against an implementer including an action for damages, a FRAND commitment could limit or affect a patent holder's ability to recover monetary damages from an infringing implementer of a standard. The reason would be that by bringing an action for damages against an implementer, the patent owner would be in breach of its contractual obligation resulting from the

216 By contrast (for the sake of comparison), a contractual obligation that would be simple to enforce by a third party beneficiary would be an obligation of the debtor to pay a given amount to such third party under certain circumstances; *see* this decision of the Swiss Federal Supreme Court: 4C.5/2003 (TF 2003) (Switz.) (interpreting the financial penalty clause of a noncompetition undertaking in a shareholders' agreement, which allowed enforcement by the company, as granting a direct enforcement right to a third party beneficiary (the company) by application of Obligationenrecht [OR] [Code of Obligations], SR 220, art. 112 ¶ 2 (Switz.) (Swiss Code of Obligations)).

217 *See, e.g.*, Allensworth 2014.

218 *See, e.g.*, BGE 98 II 305 (BGer 1972, ¶ 1) (Switz.) ("The . . . clause between the parties to the contract of sale is a preliminary contract (Art. 22 OR) in favor of third parties, i.e. the plaintiffs. They were directly favored and could therefore, according to Art. 112 (2) OR, request from the defendant that he shall conclude the main contract . . . " (translated)).

219 BGE 118 II 32 (BGer 1992, ¶ 3b) (Switz.); BGE 98 II 305 (BGer 1972, ¶ 1) (Switz.).

FRAND commitment and would thus be liable for the damages resulting from such contractual breach.[220]

2. Patent Damages under Swiss Law

As reflected in the Swiss case law[221] and legal literature,[222] Swiss law is characterized by the lack of a special legal regime that would specifically regulate the damages resulting from the infringement of IP rights. Under Swiss law, the financial consequences of an infringement of an IP right are governed by general tort law,[223] which is regulated in the Swiss Code of Obligations ("-SCO").[224] An IP infringement constitutes a tort that triggers the obligation to pay damages under the general principles of Swiss civil law, and specifically under Article 41 ¶ 1 SCO, which provides that "[a]ny person who unlawfully causes loss or damage to another, whether wilfully or negligently, is obliged to provide compensation."[225]

According to case law, there are three methods to calculate damages resulting from an IP infringement under Swiss law:[226] The first method requires the showing of an effective or direct damage ("effektiver oder direkter Schaden" according to the German terminology); the second method is based on the so-called license analogy ("Lizenzanalogie"); and the third method is based on an analogy to the income of the infringer ("Analogieschluss aus dem Gewinn des Verletzers").

The first method – based on the showing of an effective or direct damage – generally presupposes to show that the income of the victim has declined as a result of the infringement activities.[227]

The second method – license analogy – means that the infringer has to pay damages that correspond to the level of royalties that reasonable contracting parties would have agreed upon in a license agreement.[228] As reflected in case law,

[220] This could be compared to a situation in which a licensor would claim damage from a licensee that would have complied with the contractual terms of use of the license.

[221] BGE 132 III 379 (BGer 2005) (Switz.).

[222] *See, e.g.*, Benhamou 2013.

[223] This is achieved by a reference that is made in the Swiss IP statutes to the Swiss Code of Obligations; for Swiss patent law, *see* Schweizerisches Zivilgesetzbuch [ZBG] [Civil Code], SR 232.14, art. 73 ¶ 1 (Switz.) (Swiss Patent Act) which provides that "[a]ny person who performs an act referred to in Article 66 either wilfully or through negligence shall be required to pay damages to the injured party according to the provisions of the Code of Obligations."

[224] Obligationenrecht [OR] [Code of Obligations], SR 220 (Switz.).

[225] *Id.* at art. 41 ¶ 1.

[226] BGE 132 III 379 (BGer 2005, ¶ 3.2) (Switz.).

[227] *Id.* at ¶ 3.2.1.

[228] *Id.* at ¶ 3.2.2 ("The damage quantification using the method of *license analogy* means that the infringer has to pay damages to the holder of the intellectual property right in the amount of the remuneration which would have been agreed upon by reasonable contracting parties when concluding a license agreement for the relevant intellectual property right." (translated)) (internal citations omitted).

the second method aims at assessing the lost profits of the victim.[229] The victim has the burden to show the damage in the form of lost license royalties that it has suffered as a result of the IP infringement. The victim must consequently establish or at least make it probable that it has lost licensing royalties as a result of the infringing activities. Quite interestingly, the Swiss Federal Court has specified that the amount of the royalties based on a hypothetical agreement between the licensor and the licensee must be established without reference to the appropriateness of the royalties:[230] What counts in other terms is the royalties that the parties would have (subjectively) agreed upon in the relevant circumstances and not whether such royalties are (objectively) appropriate.[231]

The case law of the Swiss Federal Court is however very restrictive so that the method of license analogy for calculating the damages for IP infringement is extremely difficult to apply successfully for the victim/IP owner. In the leading case,[232] the Swiss Federal Court refused to award damages for lost royalties in a case in which the IP owner had offered a license for a flat fee of CHF 90,000 to the infringer and in which the infringer refused such offer and subsequently started to infringe the patent. In this case, the Swiss Federal Court held that the victim/IP owner had not established with sufficient probability the damage that it would have suffered, i.e., it had not established that it could have obtained the license royalties.

The third method – analogy to the income of the infringer – is not based on damage suffered by the victim but is rather based on the disgorgement of profits made by the infringer.[233] This method is based on Article 423 SCO, which provides (in the chapter "Agency without authority")[234] that "[w]here agency activities were not carried out with the best interests of the principal in mind, he is nonetheless entitled to appropriate any resulting benefits."

On this basis and in light of the case law of the Swiss Federal Court defining the calculation of damages for patent infringement based on the method of the license analogy, monetary damages for patent infringement based on a license analogy

229 *Id.* at ¶ 3.4; BGE 97 II 169 (BGer 1971, ¶ 3a) (Switz.).

230 BGE 132 III 379 (BGer 2005, ¶ 3.4) (Switz.) ("However, the application of the method presupposes proof of an asset reduction for the injured person. If loss of profit is claimed, it must be assumed that the holder of the intellectual property right should have been able to obtain the lost profit. This is not the case if the holder of the intellectual property right did not use the intellectual property right at all. Only in so far as the holder of the property right is able to prove that, as a result of the act of infringement, a license agreement and thus a license fee have probably escaped him, is it a loss of profit. In this case, however, the amount of the license fee shall be determined in accordance with the hypothetical agreement between the licensor and the licensee, irrespective of the appropriateness of the license fee." (translated)) (internal citations omitted).

231 This method evokes the hypothetical negotiation framework of the U.S. *Georgia-Pacific* framework. In addition, this approach appears to diverge from the German approach of making an objective determination of royalties based on objective reasonableness.

232 BGE 132 III 379 (BGer 2005) (Switz.).

233 *Id.* at ¶ 3.2.3, with reference to BGE 97 II 169 (BGer 1971) (Switz.); BGE 98 II 325 (BGer 1972) (Switz.).

234 Obligationenrecht [OR] [Code of Obligations], SR 220, art. 419–24 (Switz.).

could theoretically be granted even if such damages are not "appropriate"[235] or reasonable. This could for instance be the case if the patent owner had successfully negotiated (but not yet signed) a license agreement with a third party with a very high royalty payment (which might not be appropriate or reasonable by objective standards) and if the infringing activity had caused such license agreement not to be entered into (for instance because the negotiating licensee would have stopped the negotiation because of the sudden appearance of infringing products on the market). If the IP owner could prove such facts with a sufficient level of probability, it could obtain damages in the amount of the lost royalties even if such royalties would not be appropriate or reasonable.

As noted above, a FRAND commitment can imply a contractual obligation for the IP owner for the benefit of the implementers (as third party beneficiaries). The key substantive element of such commitment is the obligation to license the relevant patents on fair, reasonable, and nondiscriminatory terms. On this basis, the first source for defining the meaning of "reasonable" is the FRAND commitment itself, which must be interpreted according to the methods of interpretation that apply under the law that governs the FRAND commitment (which may make it possible to take into account other sources that can be relevant for interpreting a contract/a contractual term). Under Swiss contract law, what prevails is the subjective intention of the contracting parties as reflected in Article 18 ¶ 1 SCO, which provides that "[w]hen assessing the form and terms of a contract, the true and common intention of the parties must be ascertained without dwelling on any inexact expressions or designations they may have used either in error or by way of disguising the true nature of the agreement."

Assuming that Swiss law would apply to a FRAND commitment and that a dispute would be submitted to a Swiss court in order to decide the royalties to be paid under a FRAND license, the Swiss court would have to define the term of "reasonable" (as used in the FRAND commitment) by application of the usual methods of contract interpretation under Swiss contract law. As a result, a patent owner would have the right to receive FRAND royalties from an implementer at the level the court would consider "reasonable" based on its interpretation of the meaning of "reasonable" as used in the FRAND commitment. The Swiss court may in this respect be inspired to look at sources of international law[236] or of foreign law from which it may be tempted to draw analogies in order to define the concept of "reasonable" royalties under a FRAND commitment.

235 "angemessen."

236 Reference could be made to the TRIPS Agreement, art. 31, which provides for a compulsory mechanism (compulsory licensing of patents) for which similarities may be found with the obligation to license under a FRAND commitment, under which "the right holder shall be paid *adequate remuneration* in the circumstances of each case, taking into account the economic value of the authorization" (italics added).

In any event, in contrast to damages for patent infringement based on the method of license analogy, which may diverge from appropriate (or reasonable) royalties (see above), the royalties due under a FRAND license are in essence supposed to be "reasonable" (or appropriate). On this basis, it is unlikely that royalties paid under a FRAND license would be the same as monetary damages for infringement of the same patent and that "reasonable" royalties for FRAND purposes shall be the same as standard monetary damages for patent infringement under Swiss patent law in the scenario in which the FRAND commitment constitutes a valid contractual obligation. This reflects the difference between a contract-based royalty fee that is supposed to be "reasonable" under the FRAND framework and a tort-based damage corresponding to a lost royalty fee that is supposed to compensate the victim for the actual damage that it has suffered, whereby the damage may not be objectively "reasonable" provided that it can be established that such damage was incurred/was likely to have been incurred.

C. Korea

Unlike the United States, the typical measure of damages in Korean patent infringement suits is "total profits of the infringer" rather than "a reasonable royalty." And when damages are calculated in the form of total profits of the alleged infringer, it is difficult to distinguish FRAND-committed SEPs from non-SEPs. This issue arose in *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.*[237] As long as total profits of the infringer are concerned, it is difficult for a court to reflect a FRAND commitment in calculating damages. Even in the case of "total profits of the infringer," however, a general principle of remedies law requires the plaintiff to show some causal relation between the infringer's profits and the infringement. Accordingly, the amount of actual damages is limited to the infringer's total profits that are caused by infringing patents only. Once we take into account the causal relation between the infringer's profits and the infringing patents, we have to face a difficult question of apportionment. The Supreme Court of Korea has struggled to determine what proportion of the whole product the infringing patents cover in terms of their quantity, quality, and price. It is difficult to prove the proportional quantity, quality, and price of one out of so many patents in a multicomponent product whether or not the patent is a FRAND-committed one.

Theoretically, royalties paid under a FRAND license may be the same as monetary damages for infringement of the same patent. Unfortunately, however, there is no judicial decision yet on this issue. As Seoul Central District Court noted in *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.*, it is almost impossible to get enough data on reasonable royalties for FRAND purposes simply because most

[237] *Samsung Electronics Co. Ltd.* v. *Apple Korea Ltd.* (Dist. Ct. 2012) (Kor.).

licensing agreements are subject to an obligation of confidentiality and prohibited from disclosure of their terms and conditions.[238]

D. Japan

In *Samsung* v. *Apple Japan*, the Japanese IP High Court analyzed the patent infringement damages to which Samsung was entitled due to Apple's alleged infringement of Samsung's SEPs covering the ETSI UMTS standard.[239] In its decision, the court held that Samsung was entitled to recover damages from Apple only up to the level of a FRAND royalty.[240] Seeking damages in excess of a FRAND royalty could constitute an abuse of right unless a SEP holder demonstrates that the implementer had no intention of obtaining a license on FRAND terms, in which case damages in excess of the FRAND rate may be available.[241]

With respect to the FRAND level of royalties, the court first determined the percentage of the total value of the infringing products contributed by the UMTS standard.[242] It then determined that an aggregate royalty rate of 5 percent should be applied to all patents covering the UMTS standard, based on an analysis of industry practices and prior royalty commitments made by the parties and other industry participants.[243] It then found the FRAND royalty for an individual SEP by dividing the total royalty for UMTS by the number of UMTS SEPs identified by an independent third party (529 out of the total 1,889 SEPs declared to be essential to the standard).[244]

E. China

Thus far, courts in China have rendered judgments in three cases involving FRAND-committed SEPs. The first was the 2013 decision of the Shenzhen Intermediate People's Court in *Huawei Tech. Co., Ltd.* v. *InterDigital Commc'ns, Inc.*,[245] which involved InterDigital's portfolio of Chinese patents essential to the WCDMA, CDMA2000, and TD-SCDMA 3G wireless communication standards. After negotiations between the parties failed, Huawei filed two complaints against InterDigital, one for violation of China's Anti-Monopoly Law, and another requesting the court to set a FRAND royalty.[246] The court concluded that InterDigital had

[238] *Id.*
[239] *Samsung Elecs. Co.* v. *Apple Japan LLC* (IP High Ct. 2014) (Japan) (FRAND I).
[240] *Id.* at 124–25.
[241] *Id.* at 123–24.
[242] *Id.* at 132–33.
[243] *Id.* at 135–36.
[244] *Id.* at 137–38.
[245] *Huawei Tech. Co., Ltd.* v. *InterDigital Commc'ns, Inc.* (Guangdong Higher People's Ct. Oct. 28, 2013) (China).
[246] *Id.*

breached its obligation to license its patents on FRAND terms and that, based on the royalty rates Samsung and Apple had paid InterDigital for similar licenses, a FRAND royalty rate for the patents-in-suit would be 0.019 percent of end-product prices. The decision was affirmed on appeal by the Guangdong High Court.[247]

Second, as discussed in Section 5.3.5 above, in *Iwncomm* v. *Sony*, the Beijing IP court issued an injunction for the infringement of a FRAND-committed SEP covering the Chinese WAPI standard relating to wireless networking.[248] In addition, the court issued an award of monetary damages to Iwncomm, the SEP holder, in the amount of RMB 8,629,173. On the issue of monetary compensation, according to Shen and Ge:

> The court fully adopted Iwncomm's damages theory, citing the fact that the invention is a basic invention in the WLAN security field and that Sony was at fault during the negotiation. The court did not analyse in detail whether the licenses in evidence are comparable, merely noting that the territorial scope and duration of these licenses suggest that they can be referred to. Further, despite the fact that Iwncomm's four licenses are all licenses for a portfolio of patents, the court held that the rate of 1 RMB per unit would be applicable for a single WAPI patent at issue.[249]

The court then (1) multiplied this rate by the number of infringing devices, and (2) trebled the resulting amount as permitted under Article 21 of China's Patent Trial Guidelines.[250] So understood, the decision does not appear to involve a judicial determination of a FRAND royalty as such, but rather simply a damages award.

Finally, as discussed in Section 5.3.5 above, the Shenzhen Intermediate People's Court recently issued an injunction for the infringement of two FRAND-committed patents essential to the 4G standard in *Huawei* v. *Samsung*.[251]

[247] *Id.*

[248] For further discussion of *Xian Xidian Jietong Wireless Commc'n Co., Ltd. (IWNComm)* v. *SONY Mobile Commc'n Prods. (China) Co. Ltd.* (Beijing IP Ct. Mar. 22, 2017) (China), *see* Bharadwaj & Verma 2017.

[249] Shen & Ge 2017.

[250] *Id.*

[251] As of this writing, an English-language translation of the January 2018 *Huawei* v. *Samsung* decision is not available, but a summary of the court's reasoning can be found in Schindler 2018.