

PETER GEORG PICHT* / JORGE L. CONTRERAS**

Proportionality Defenses in FRAND Cases: a Comparative Assessment of the Revised German Patent Injunction Rules and U.S. Case Law

In August 2021, the ‘Second Act for the Modernization of Patent Law’ (*Zweites Patentrechtsmodernisierungsgesetz*) introduced an explicit proportionality defense into Sec. 139(1) German Patent Act. Unlike the competition law or national contract law prong of the *Huawei* defense in FRAND cases, the proportionality defense thus derives from the GPA itself. The new provision has already generated much debate and some initial case law. According to public knowledge, however, it has not yet been raised in a German FRAND case, although it seems inevitable that this will happen. Hence, this article offers to market participants and the judiciary a proposed analytical framework for considering such a proportionality defense in German FRAND cases. For this purpose, it undertakes a comparative assessment of U.S. patent injunction law. As to German law, the focus is on whether the proportionality defense and the FRAND license defense can be raised in parallel, whether FRAND royalties are a suitable basis for calculating an appropriate financial compensation under Sec. 139(1)(4) and how a court should assess whether the impact of an injunction in a FRAND case triggers the proportionality defense.

I. Introduction

Since the Court of Justice of the European Union’s 2015 decision in *Huawei v ZTE*,¹ the holder of patents essential to an industry standard (standard-essential patents or SEPs) seeking to obtain an injunction in the EU against an unlicensed implementer’s infringement of those SEPs must comply with a set of procedural rules laid out in *Huawei*, as well as subsequent Member State interpretations thereof. These conduct rules are mainly rooted in European competition law, and are used to determine whether the SEP holder’s attempt to obtain such an injunction should be considered an abuse of a dominant market position violating Sec. 102 TFEU. As part of the analysis, the conduct of both the SEP holder and the implementer during licensing negotiations is considered by the court. If an abuse of dominance is found to exist, then no injunction will be issued, whereas if no such abuse is found, the SEP holder may seek the injunction without violating Sec. 102. In practice, the *Huawei* analysis has become a central element of the defense (often called a ‘FRAND defense’) raised by an implementer opposing the entry of such an injunction. *Huawei v ZTE* was certified to the CJEU by the German courts, and since it was decided the German courts have ruled in a large number of FRAND injunction cases.

Through their application of the *Huawei* rules, they have clarified and elaborated this legal framework in important respects.

There is a second available defense against such injunctions – or rather a second interpretation of the *Huawei* defense – that some European commentators and courts have identified.² This defense is rooted in contract law (particularly French contract law for ETSI standards) and posits that an injunction should not be issued against an implementer because the SEP holder has agreed to offer fair, reasonable and non-discriminatory (FRAND) licenses under the standards development organization’s (SDO) IPR policy, thereby forming a binding contractual obligation between the SEP holder and the SDO, and that all implementers of the standard, whether or not members of the SDO, are intended third-party beneficiaries of that contractual commitment who are entitled to enforce it directly against the SEP holder. This contractual defense, while not addressed explicitly in *Huawei v ZTE* itself, requires largely the same inquiries that arise in the competition-focused analysis of *Huawei*: is the implementer actually entitled to such a license, or has it, by its conduct, effectively forfeited that right and thereby become subject to an injunction? Due arguably in part to the similarity of the analysis, German courts usually³ do not address the contract law defense as a separate step in addition to the

* Prof. Dr., LL.M. (Yale), University of Zurich, Switzerland; Director Center for Intellectual Property and Competition Law.

** James T. Jensen Endowed Professor for Transactional Law and Director, Program on Intellectual Property and Technology Law, University of Utah S.J. Quinney College of Law, USA.

¹ Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477.

² See, for instance, *Unwired Planet v Huawei* [2017] EWHC 711 (Pat); Regional Court (Landgericht) Munich, 23 October 2020, 21 O 11384/19; Peter Picht, ‘*Unwired Planet v. Huawei*: A Seminal SEP/FRAND Decision from the UK’ [2017] GRUR Int 569, 576 f.

³ For an exception, see Regional Court (Landgericht) Munich, 23 October 2020, 21 O 11384/19.

competition law-based defense. One reason why it has, however, gained more traction in academic circles, as well as e.g. in UK case law, is the importance of contractual principles to the analysis of FRAND disputes under U.S. law.⁴

Now, however, a third potential defense against injunctions in FRAND cases has arisen in Germany, and its relationship to the *Huawei* defense (whether viewed as a competition or contractual matter) is largely unexplored. In August 2021, the ‘Second Act for the Modernization of Patent Law’ (*Zweites Patentrechtsmodernisierungsgesetz*)⁵ took effect and modified the German Patent Act (GPA) in several respects. Pertinent to our topic is an amendment to Sec. 139(1) GPA which introduced an explicit proportionality defense against injunction claims. It is under discussion whether this defense must be raised by the infringer (*Einrede*)⁶ or whether – as suggested by the majority of authors so far⁷ – courts must consider it *ex officio* (*Einwendung*). In any case, the defense strongly draws upon the *Heat Exchanger* decision of the German Federal Supreme Court (*Bundesgerichtshof* – BGH).⁸ In this leading case, the Court acknowledged that proportionality notions in German patent injunction law allow, under exceptional circumstances, for the granting of a grace period during which the patent infringer can sell its stock of infringing products.⁹ Upon a closer look, the new proportionality mechanism consists of three main elements: first, Sec. 139(1) (3) GPA excludes the claim to an injunction in case of patent infringement to the extent such injunction

would result, due to the particular circumstances of the individual case at issue and with a view to the principle of good faith, in a hardship for the infringer or third parties that would be disproportionate and not justified by patent exclusivity; second, Sec. 139(1)(3), (4) GPA entitle the patentee to appropriate financial compensation if the injunction is denied, without prejudice to its other claims for damages; third, Sec. 142(7) GPA exempts an infringer from penal law sanctions to the extent Sec. 139(1)(3) GPA excludes an injunction.

These provisions have already generated much debate. Some have argued that the requirements for excluding an injunction should be more closely aligned with the *Heat Exchanger* decision, in particular by expressly mentioning the pro-injunction interests of the patentee instead of defensive third-party interests.¹⁰ Others have urged the German legislature to go much further in limiting injunctions.¹¹ Many commentators doubt whether the wording now enacted will substantially alter German injunction practice.¹² The first court decisions applying the new provisions emphasize that they merely codify the *status quo ante*, i.e. a proportionality limitation on the injunction claim along the lines drawn by the *Heat Exchanger* case.¹³ In any case, the GPA’s reference to proportionality echoes Art. 3(2) European Enforcement Directive (Directive 2004/48/EG), which also requires consideration of the proportionality of an injunction before it is issued. But as we and other commentators¹⁴ have previously observed, the Enforcement Directive, and its proportionality provisions in particular, have not been widely and explicitly adopted in national law. The enactment of Sec. 139(1) (3) GPA seems to be the first major stipulation of this principle in national EU Member State patent law. Unlike the competition law or national contract law prong of the *Huawei* defense in FRAND cases, the proportionality defense derives from the GPA itself.

To public knowledge, such a proportionality defense based on Sec. 139(1)(3) has not yet been raised in a German FRAND case, but it seems inevitable that this will happen. Hence, this article offers to market participants and the judiciary a proposed analytical framework for considering such a proportionality defense in German FRAND cases. To do so, Section II. of this contribution considers whether the injunction law of the United States may offer useful guidance, or at least

4 The strength of this contractual defense, even under U.S. law, varies depending on the precise terms of the relevant SDO IPR policy. Some SDO policies are quite explicit regarding the extension of third-party benefits to implementers of a standard and expressly prohibit a SEP holder from seeking an injunction against a willing licensee (eg IEEE), and while others may be silent on this question, their drafting and adoption history may imply that such third-party benefits are intended and that injunctions should not be sought against implementers. See Jorge L. Contreras, ‘A Market Reliance Theory for FRAND Commitments and Other Patent Pledges’ [2015] *Utah L Rev* 479, 482–84, 501–17 (analyzing contractual paradigm in detail); Robert Pocknell and Dave Djavaherian, ‘The History of the ETSI IPR Policy: Using the Historical Record to Inform Application of the ETSI FRAND Obligation’ (2023) 76 *Rutgers L Rev* (forthcoming) (discussing history of ETSI policy). Note that we do not address the situation, even in Germany, in which a SEP holder is expressly and unambiguously bound by a contractual commitment (separate from the SDO IPR policy) to grant a license to an implementer, as this question is a straightforward matter of contract law. The arguments of this article are limited to situations in which such an express contract does not exist.

5 BGBl 2021 I, 3490.

6 Mary-Rose McGuire, ‘Zweites Patentrechtsmodernisierungsgesetz – Offene (prozessuale) Fragen’ [2022] *Mitteilungen der deutschen Patentanwälte* 49, 52.

7 Ansgar Ohly and Martin Stierle, ‘Unverhältnismäßigkeit, Injunction Gap und Geheimnisschutz im Prozess’ [2021] *GRUR* 1229, 1230; Christian Harmsen, ‘Zu den Voraussetzungen der Aufbrauchfrist im Patentrecht’ [2021] *GRUR* 222, 226; Johann Pitz, ‘§ 35 marginal No 16’ in Christoph Ann (ed), *Patentrecht* (8th edn, CH Beck 2022); Johann Pitz, ‘§ 139 marginal No 90g’ in Uwe Fitzner, Raimund Lutz and Theo Bodewig (eds), *BeckOK Patentrecht* (23rd edn, CH Beck 15 January 2022).

8 German Federal Supreme Court, 10 May 2016, X ZR 114/13 – *Wärmetauscher*.

9 *Wärmetauscher* (n 8) paras 40 f; for the case at bar, however, the Federal Supreme Court denied a grace period. For a discussion of the decision, see eg Harmsen (n 7) 222; Christian Osterrieth, ‘Technischer Fortschritt – eine Herausforderung für das Patentrecht? Zum Gebot der Verhältnismäßigkeit beim patentrechtlichen Unterlassungsanspruch’ [2018] *GRUR* 985.

10 See, for instance, Mary-Rose McGuire, ‘Stellungnahme zum 2. PatModG: Ergänzung des § 139 I PatG durch einen Verhältnismäßigkeitsvorbehalt?’ [2021] *GRUR* 775, 780 ff.

11 eg IP2innovate, ‘Stellungnahme zum Diskussionsentwurf des Bundesministeriums der Justiz und für Verbraucherschutz eines Zweiten Gesetzes zur Vereinbarung und Modernisierung des Patentrechts (PatMoG) vom 14. Januar 2020’ (10 March 2020) <https://www.bmj.de/SharedDocs/Gesetzgebungsverfahren/DE/PatMoG_2.html> accessed 16 February 2023.

12 Fabian Hoffmann, ‘Stellungnahme zu einem 2. PatMoG’ (19 February 2021) 1 <<https://www.bundestag.de/resource/blob/823364/097add0b-3fbc63e24c8aa37b2807a84/stellungnahme-Hoffmann-data.pdf>> accessed 16 February 2023.

13 Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 158; Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 41.

14 See Jorge L. Contreras and Martin Husovec (eds), *Injunctions in Patent Law: Trans-Atlantic Dialogues on Flexibility and Tailoring* (CUP 2022) (including chapters discussing various EU member state laws); Ohly and Stierle (n 7) 1230.

cautionary notes, for the German context.¹⁵ While the introduction of a proportionality defense presents various additional issues, Section III. focuses primarily on three aspects: whether the proportionality defense and the FRAND license defense can be raised in parallel (III.1.), whether FRAND royalties are a suitable basis for calculating appropriate financial compensation under Sec. 139(1)(4) (III.2.) and how a court should assess whether the impact of an injunction in a FRAND case is disproportionate and not justified by the exclusivity conferred on the patent holder (III.3.). Finally, Section IV. tries to draw some additional, comparative conclusions.

II. The U.S. perspective

In *eBay v MercExchange* (2006),¹⁶ the U.S. Supreme Court established that a permanent injunction in a U.S. patent case will only be issued if four conditions are met: (1) the patent holder will suffer irreparable harm unless the injunction is granted; (2) monetary damages alone will not adequately compensate the patent holder; (3) the harm to the infringer from issuance of the injunction is outweighed by the harm to the patent holder from the absence of an injunction; and (4) the public interest will not be harmed by issuance of the injunction.¹⁷ *eBay* factors (1) and (2) reflect the origin of the U.S. injunction as a common law equitable remedy¹⁸ and are thus less evidently a part of the German injunction analysis. Factors (3) and (4), however, clearly raise issues of proportionality, both between the parties and with respect to the public, and may thus, in particular, inform German courts' application of Sec. 139(1)(3).

This being said, in FRAND cases, U.S. courts have largely focused on *eBay* factors (1) and (2), inasmuch as a SEP holder has agreed to accept a monetary royalty in exchange for the practice of its SEPs (i.e. suggesting that it will not be irreparably harmed by the practice of the patent by others, and that monetary damages will compensate it for any harm resulting from the infringement). While U.S. courts have rejected a per se rule against the issuance of injunctions when SEPs are infringed,¹⁹ *eBay* factors (1) and (2) appear to weigh heavily against the issuance of such injunctions, at least when an infringer is 'willing' to pay for a license.²⁰ Accordingly, no U.S. court

has yet issued an injunction against infringement of a SEP when the patent holder has committed to grant a FRAND license to the infringer.

1. Balancing the equities under *eBay* factor 3

Factor 3 of the *eBay* test requires a court to consider the balance of equities of the parties in determining whether to grant an injunction. This balancing requires consideration of which party will bear a greater burden if an injunction is issued or not issued. In many cases, this analysis simply favors the smaller party, as the impact of an injunction (or lack thereof) will likely have a greater effect on its business.²¹ This may not be the case, however, if the alleged infringer's product has not yet entered the market.²²

In *Apple v Samsung*, the Federal Circuit balanced the hardships and equities of two large multinational technology vendors.²³ In that case, Apple sought to enjoin Samsung's sale of smartphones including features that infringed Apple's patents. In seeking to minimize the damages that would be awarded to Apple, Samsung argued that it could easily design around Apple's patented smartphone features. The court, in assessing the balance of equities between the parties, reasoned that if Samsung could design around Apple's patents, then it would suffer little harm from the entry of an injunction in Apple's favor.²⁴

Other factors that may be considered with respect to the hardships and equities of the parties include the relative value of the patented invention to an end product, and whether infringement was intentional or inadvertent.²⁵

2. The public interest under *eBay* factor 4

The fourth *eBay* factor expressly requires courts to consider the public interest in determining whether to issue an injunction. Consideration of the public interest in the issuance of U.S. patent injunctions significantly predates the *eBay* decision.²⁶ For example, an injunction was denied in the 1934 case *City of Milwaukee v Activated Sludge*²⁷ to ensure the continued public availability of a patented sewage treatment process.

In recent years, the public interest factor has most frequently been invoked with respect to technologies

¹⁵ For a general discussion of differences between U.S. and German judicial approaches to FRAND cases, see, eg, Thomas F Cotter, 'Like Ships That Pass in the Night: U.S. and German Approaches to FRAND Disputes' in Peter Georg Picht, Erik Habich and Thomas F Cotter (eds), *FRAND: German Case Law and Global Perspectives* (Edward Elgar Publishing 2023); Contreras and Husovec (n 14); Jorge L Contreras and others, 'The Effect of FRAND Commitments on Patent Remedies' in C Bradford Biddle and others (eds), *Patent Remedies and Complex Products: Toward a Global Consensus* (CUP 2019) 160.

¹⁶ 547 US 388 (2006).

¹⁷ The *eBay* case related to the standard for issuing permanent injunctions in U.S. patent cases. A similar test was established for preliminary injunctions in *Winter v Natural Res Def Council Inc* 555 US 7, 20 (2008). The factors in preliminary injunction cases are (1) the likelihood of the patentee's success on the merits, (2) irreparable harm, (3) balance of the equities and (4) public interest. See John C Jarosz, Jorge L Contreras and Robert L Vigil, 'Preliminary Injunctive Relief in Patent Cases: Repairing Irreparable Harm' (2023) 31 *Tex Intell Prop LJ* (forthcoming).

¹⁸ See Jorge L Contreras, 'Injunctive Relief in U.S. Patent Cases' in Rafal Sikorski (ed), *Patent Law Injunctions* (Kluwer 2018) 3, 3-4.

¹⁹ *Apple Inc v Motorola Inc* 757 F 3d 1286, 1331 (Fed Cir 2014).

²⁰ *ibid* 1332.

²¹ Kimberly A Moore, Timothy R Holbrook and John F Murphy, *Patent Litigation and Strategy* (4th edn, West Publ 2013) 883.

²² *Pozen Inc v Par Pharmaceutical Inc* 800 F Supp 2d 789, 825 (ED Tex, 5 August 2011).

²³ *Apple Inc v Samsung Elecs Co Ltd* 809 F 3d 633 (Fed Cir 2015).

²⁴ *ibid* 645-46.

²⁵ Donald S Chisum, *Chisum on Patents: A Treatise on the Law of Patentability, Validity and Infringement* (LexisNexis 2015) at Sec. 20.04[2][c][iv]-[v]; Thomas F Cotter, *Comparative Patent Remedies: A Legal and Economic Analysis* (OUP 2013) 106.

²⁶ This is not surprising, given that the U.S. Supreme Court in *eBay* purported simply to reflect 'well-established principles of equity', 547 US 391. This claim has, however, been questioned by scholars. See Mark P Gergen, John M Golden and Henry E Smith, 'The Supreme Court's Accidental Revolution? The Test for Permanent Injunctions' (2012) 112 *Colum L Rev* 203.

²⁷ 69 F 2d 577 (7th Cir 1934).

affecting public health.²⁸ For example, the court in *Hybritech Inc v Abbott Labs*²⁹ denied the patent holder an injunction to ensure the continued public availability of cancer and hepatitis testing kits. Such public health considerations need not relate to life-saving technologies, however. In *Johnson & Johnson Vision Care Inc v Ciba Vision Corp*, Johnson & Johnson's contact lenses were found to infringe a CIBA patent.³⁰ However, because an injunction would have required nearly 5.5 million U.S. consumers to be refitted for new contact lenses, the court denied an injunction, explaining that an injunction would 'create consequential medical, practical and economic issues for large numbers of ... users'.³¹

This being said, the existence of public health considerations, while important, does not automatically outweigh the rights of patent holders. For example, the court in *Sanofi-Synthelabo v Apotex Inc* explained that 'the public interest in having access to generic drugs at reduced prices' or simply providing an alternative for the convenience of physicians or customers is insufficient to outweigh the other *eBay* factors.³² This is particularly the case when an injunction will prevent the distribution of a generic drug but the patented drug continues to be available to the public, even at a higher price.³³

Likewise, mere speculative harm to the public interest is often insufficient to outweigh other factors favoring the issuance of an injunction.³⁴ Thus, in *Amgen Inc v F Hoffman-La Roche*,³⁵ the court granted an injunction even though doctors and patients might have benefited from the availability of additional treatment beyond the patented article. The Court reasoned that an injunction was warranted absent 'solid evidence' that the public would 'suffer significant harm if the status quo is maintained'.³⁶ Similarly, the court in *Smith & Nephew Inc v Interlace Med Inc* held that 'anecdotal evidence about physician preference is not enough to prove an issue of patient safety'.³⁷

In addition to public health, considerations relating to climate change and environmental impact have entered the public interest analysis. For example, in *Siemens Gamesa Renewable Energy A/S v General Electric Co*,³⁸

a federal district court recently acknowledged that the world's 'rapidly developing climate crisis' is a public interest 'of key concern'.³⁹

Public interest considerations under *eBay* also extend to the public availability of standardized technologies. In *Apple v Motorola*, Motorola sought an injunction against Apple on the basis of several SEPs. In affirming the district court's denial of the injunction, the Federal Circuit acknowledged that 'the public has an interest in encouraging participation in standard-setting organizations',⁴⁰ which could be viewed as giving leniency to SEP holders to assert their rights. However, the court also acknowledged that the public has an interest 'in ensuring that SEPs are not overvalued' if the rates demanded by SEP holders do not exceed FRAND levels.⁴¹ Additionally, the Court recognized a public interest in consumer access to non-infringing product features, especially when the asserted patents cover only a small subset of a product's functionality.⁴² Thus, in the SEP context, public interest considerations can be viewed as supporting both the SEP holder and the alleged infringer.

Some courts have further identified a public interest in protecting 'the rights secured by valid patents'.⁴³ As such, the Federal Circuit has held that public access to an infringing product must be weighed against the general public interest in having enforceable patents, and injunctions may warrant issuance even if they may 'discommode business and the consuming public'.⁴⁴ The Federal Circuit adopted this reasoning in *Apple v Samsung*, writing that the enforcement of patent rights 'promote[s] the encouragement of investment-based risk' and 'may prompt introduction of new alternatives to patented features', thus increasing consumer choice.⁴⁵ The court in that case concluded that 'the public interest nearly always weighs in favor of protecting property rights in the absence of countervailing factors, especially when the patentee practices his inventions'.⁴⁶ This position, which is regularly expressed in cases, appears to give little weight to issues of public need for patented technologies and instead favors the issuance of injunctions.

²⁸ See Aaron Stiefel and Krista Carter, '10 Years Later – Impact of *eBay* on Patent Injunctions in the Life Sciences' (*Bloomberg Law*, 20 June 2016) <<https://news.bloomberglaw.com/ip-law/10-years-later-impact-of-ebay-on-patent-injunctions-in-the-life-sciences>> accessed 16 February 2023 ('[T]he public interest factor ... continues to be the most common barrier to an injunction for life sciences companies').

²⁹ 849 F 2d 1446 (Fed Cir 1988).

³⁰ *Johnson & Johnson Vision Care Inc v Ciba Vision Corp* 712 F Supp 2d 1285, 1286 (MD Fla 2010).

³¹ *ibid* 1290-92.

³² *Sanofi-Synthelabo v Apotex Inc* 492 F Supp 2d 353, 397 (SDNY 2007).

³³ *Pozen Inc v Par Pharm Inc* 800 F Supp 2d 789, 825 (ED Tex, 5 August 2011).

³⁴ Stiefel and Carter (n 28).

³⁵ *Amgen Inc v F Hoffman-La Roche* 581 F Supp 2d 160 (D Mass 2008).

³⁶ *ibid* 210.

³⁷ 955 F Supp 2d 69, 80 (D Mass 2013).

³⁸ 2022 US Dist LEXIS 161068, Civ. No. 21-10216-WGY (D Mass, 7 September 2022).

³⁹ *ibid* para. 12. Though the court granted a permanent injunction in this case, it carved out from the injunction two ongoing wind energy projects given the potential impact to the local communities and the effort to abate climate change that terminating the projects could have.

⁴⁰ *Apple v Motorola* 757 F 3d 1286, 1332 (Fed Cir 2014).

⁴¹ *ibid*.

⁴² *ibid* 1331 ('we also consider the impact on the general public of an injunction on a product with many non-infringing features'). See also *Apple Inc v Samsung Elecs Co*, 735 F 3d 1352, 1372-73 (Fed Cir 2013) ('We see no problem with the district court's decision, in determining whether an injunction would disserve the public interest, to consider the scope of Apple's requested injunction relative to the scope of the patented features and the prospect that an injunction would have the effect of depriving the public of access to a large number of non-infringing features').

⁴³ *Polaroid Corp v Eastman Kodak Co* 228 USPQ 305, 343-344 (D Mass 1985) (citations omitted).

⁴⁴ *ibid*.

⁴⁵ *Apple v Samsung* 809 F 3d at 646 (Fed Cir 2015).

⁴⁶ *ibid* 647. In making this argument, the court concedes that 'Apple does not seek to enjoin the sale of lifesaving drugs', suggesting that in some cases public health and safety may still outweigh the public's interest in enforcing patent rights.

3. Proportionality at the U.S. International Trade Commission

The U.S. International Trade Commission (ITC) is an independent federal agency authorized by statute to protect U.S. commerce by barring the importation of infringing goods into the U.S. Because the ITC lacks the authority to award monetary damages, the principal remedy available from the ITC is an exclusion order, which prohibits goods that are found to infringe U.S. intellectual property rights from entering the country.⁴⁷ In this sense, exclusion orders granted by the ITC are similar to injunctions issued by U.S. courts.

a) The ITC's public interest analysis

In recent years, the ITC has become a popular venue for patent infringement suits. The ITC, however, is not a court and is not bound by Supreme Court precedent. Thus, the ITC is not required to apply the *eBay* factors when considering a request for an exclusion order. Rather, when considering whether to grant an exclusion order, the ITC must 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'.⁴⁸ In addition to a clearly evidenced public interest, the ITC also requires a finding that domestic producers are unable to satisfy consumer demand for the infringing product in the U.S. market. This set of requirements, which were added to the ITC's governing statute in 1974, is generally referred to as the ITC's 'public interest' test.

Unlike the public interest factor of the *eBay* framework, which has frequently resulted in the denial of injunctions, the ITC has denied an exclusion order based on the public interest only four times.⁴⁹ The first three instances occurred in the 1970s and 1980s, in the years following the creation of the statutory requirement. In the first such case, the ITC declined to issue an exclusion order preventing the import of automotive crankpin grinders, which are used to make components for combustion engines.⁵⁰ The ITC found there was an overriding national interest in the supply of fuel-efficient automobiles in light of the oil crisis of the late 1970s and that the domestic industry could not meet the demand for these devices. In the second case, the ITC declined to issue an exclusion order against infringing particle accelerator tubes used in nuclear research because the imported tubes were 'greatly superior' to those available domestically and 'basic scientific research ... is precisely the kind of activity intended by Congress to be included when it required the Commission to consider ... the public health and welfare'.⁵¹ The third case involved

infringing hospital beds for burn victims, which the ITC declined to exclude from the U.S. market after finding that the domestic producer could not meet demand for the beds and there were no therapeutically comparable beds available in the U.S.⁵²

In contrast to these cases, the ITC in the 1990s granted exclusion orders with respect to a variety of products that had less perceived impact on public health and safety, such as toothbrushes⁵³ and computer hardware emulators.⁵⁴ The ITC noted in both of these cases that these products are not of the kind that had in the past raised public interest concerns, such as drugs and medical devices.

The ITC's early cases that declined the issuance of exclusion orders concerned highly specialized products with limited markets and for which there were no comparable domestic substitutes. In the 2010s, cases began to emerge involving mass market consumer devices such as smartphones, tablets and computers that allegedly infringed SEPs covering the wireless communications standards embodied in those devices. Thus, in 2011, the ITC issued an exclusion order against the importation of certain Qualcomm baseband chips for 3G networks that infringed Broadcom's SEPs.⁵⁵ However, in response to submissions by emergency first responders and others who emphasized the impact that a ban would have on public safety, the ITC exempted from that exclusion order chips used in previously imported models of mobile phones and other devices using those chips.

b) The ITC's SEP cases

Two years later, as part of the broader global patent dispute between Apple and Samsung, the ITC issued an exclusion order prohibiting Apple from importing smartphones and tablets that infringed certain Samsung SEPs.⁵⁶ Later that year, however, the U.S. Trade Representative (USTR), the chief U.S. official in charge of international trade, acting in his statutory capacity under 19 USC Sec. 1337(j), disapproved (thereby vetoing) the ITC's exclusion order against Apple, reasoning that the ITC did not act on the basis of a sufficient factual record regarding, *inter alia*, 'information on the standards essential nature of the patent at issue ... and the presence or absence of patent hold-up or reverse hold-up'.⁵⁷ This lack of a sufficient factual basis for the exclusion order was dispositive, given the substantial public interest inherent in the

⁴⁷ 19 USC § 337(a)(1)(A).

⁴⁸ 19 USC § 1337(d)(1).

⁴⁹ See P Andrew Riley and Scott A Allen, 'The Public Interest Inquiry for Permanent Injunctions or Exclusion Orders: Shedding the Myopic Lens' (2015) 17 Vand J Ent & Tech L 751, 763-64.

⁵⁰ Certain Automatic Crankpin Grinders, Inv No 337-TA-60, USITC Pub 1022 at 20 (1 December 1979) (Final).

⁵¹ See Certain Inclined Field Acceleration Tubes and Components Thereof, Inv No 337-TA-67, USITC Pub 1119 (29 December 1980) (Final).

⁵² See Certain Fluidizing Supporting Apparatus and Components Thereof, Inv No 337-TA-182/188, USITC Pub 1667 (5 October 1984) (Final).

⁵³ Certain Toothbrushes and the Packaging Thereof, Inv No 337-TA-391, USITC Pub 3068, at 6 (15 October 1997) (Final) (Commission Opinion on Remedy, the Public Interest, and Bonding).

⁵⁴ Certain Hardware Logic Emulation Systems and Components Thereof, Inv No 337-TA-383, USITC Pub 2991, at 9 (16 October 1996) (Commission Opinion on Remedy, the Public Interest, and Bonding).

⁵⁵ Certain Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Prods. Containing Same, Including Cellular Telephone Handsets, Inv No 337-TA-543, USITC Pub 4258 (October 2011) (Final).

⁵⁶ In re Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers, ITC Inv No 337-TA-794.

⁵⁷ Letter from Ambassador Michael BG Froman, US Trade Representative to Hon. Irving A Williamson (3 August 2013).

availability of standardized products to U.S. consumers and businesses.

In subsequent cases, the ITC has more extensively considered factors relating to SEPs when conducting its public interest analysis.⁵⁸ In 2019, the ITC considered the issuance of an exclusion order against Apple products that contained Intel chips that allegedly infringed SEPs held by Qualcomm. The administrative law judge (ALJ) in the case determined that it would not be in the public interest to ban the import of iPhones containing the infringing chips. Nearly 20 members of Congress urged the ITC to follow the ALJ's recommendation and deny the exclusion order on public interest grounds. The gist of their argument was that an exclusion order would weigh against the public interest by giving Qualcomm a monopoly in the chipset market and thereby undermining competition. The ITC, which found that Apple's products did not actually infringe Qualcomm's asserted patents, ultimately did not reach the public interest question.⁵⁹

Similarly, in 2022, the ITC considered the entry of an exclusion order against Thales and several other companies for the importation into the U.S. of mobile devices that allegedly infringed SEPs held by Philips. The Chair of the U.S. Federal Trade Commission, together with a sitting Commissioner, submitted a statement on the public interest to the ITC, stating that 'we are increasingly concerned that SEP holders who have committed to license SEPs on fair, reasonable, and nondiscriminatory (FRAND) terms are seeking exclusionary orders to ban products from the marketplace for the purpose of gaining leverage over existing or potential licensees. In our view, where a complainant seeks to license and can be made whole through remedies in a different U.S. forum, an exclusion order barring standardized products from the United States will harm consumers and other market participants without providing commensurate benefits.'⁶⁰ The case involved a district court proceeding running concurrently with the ITC proceeding, and the FTC Commissioners also expressed concern that 'exclusionary relief is incongruent and against the public interest where a court has been asked to resolve FRAND terms and can make the SEP holder whole'. However, like the 2019 *Apple* case, the ITC ultimately resolved the matter in favor of Thales on other grounds, without reaching the public interest question.⁶¹

Viewed together, these cases suggest that the conception of the 'public interest' at the ITC has expanded well beyond the limited health and safety issues that motivated cases in the 1970s and 1980s. Today, considerations such as market access, harm to consumers and competitors and the availability of alternative remedies all seem to be on the table in discussions of the public interest.

⁵⁸ See, eg, *In re Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof*, ITC Inv No 337-TA-868 (13 June 2014).

⁵⁹ *Certain Mobile Electronic Devices and Radio Frequency and Process Components Thereof*, Inv No 337-TA-1065. A second ITC investigation concerning additional Qualcomm patents was also ongoing when the parties settled their global dispute in April 2019.

⁶⁰ *Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same*, Inv No 337-TA-1240, Written Submission On The Public Interest of Federal Trade Commission Chair Lina M Khan and Commissioner Rebecca Kelly Slaughter (16 May 2022).

⁶¹ *Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same*, Inv No 337-TA-1240 (6 July 2022).

4. Proportionality and tailoring of injunctions in the U.S.

The exercise of proportionality principles under U.S. injunction law is not limited to the threshold decision whether or not to issue an injunction. Once a U.S. court or agency has decided to issue an injunction in a particular case, it has significant discretion to shape the injunction order to address different private and public considerations.⁶² As observed by Golden, 'judges appear to have especially wide discretion in tailoring the timing and scope of injunctive relief and such tailoring can mitigate potentially disproportionate effects or other negative social impacts from a court's injunction against further infringement'.⁶³ Such tailoring mechanisms include delaying the effectiveness of an injunction in order to permit the infringer either to sell off its existing stock of infringing inventory or to design around the infringed patent; adjusting the scope of the injunction to cover products and services colorably related to the infringing project; ordering the infringer to destroy, disable or deliver infringing and related products to a third party; or carving out from the scope of the injunction particular infringing acts that are deemed to be socially valuable.⁶⁴ In addition, when U.S. courts elect *not* to issue injunctions after a finding of patent infringement, they typically impose royalty payment obligations on the infringer to compensate the patent holder for the ongoing infringement, thereby lessening the impact on the patent holder of the denial of the injunction.⁶⁵

5. Lessons from U.S. law for German courts

U.S. courts and agencies have assessed the proportionality of injunctions in SEP cases for more than a decade. And while these assessments are not fully translatable to the German context, they suggest at least some of the factors that German courts could consider when interpreting Sec. 139(1)(3) GPA. For example, factors that could inform a German analysis of the proportionality of a particular SEP-based injunction – possibly beyond the aspects judges would ordinarily attach much importance to – include the potential impact of the injunction on the availability of standardized products to German consumers and businesses; the importance of such products to the environment, public health, daily life and infrastructure; as well as the potential effect of such an injunction on German producers, importers and manufacturers.

Finally, the balance of this article will assess whether German courts should consider, as part of their proportionality analysis, the effect that the issuance of an injunction may have on the decision of foreign firms to make investments

⁶² Jorge L. Contreras and Martin Husovec, 'Issuing and Tailoring Patent Injunctions – A Cross-Jurisdictional Comparison and Synthesis' in Contreras and Husovec (n 14) 313, 331-32.

⁶³ John M Golden, 'United States' in Contreras and Husovec (n 14) 291, 308.

⁶⁴ Golden in Contreras and Husovec (n 63) 303-06; Contreras and Husovec (n 62) 326-27. As a recent example of the last of these mechanisms, see *Siemens Gamesa Renewable Energy A/S v General Electric Co*, discussed at nn 38-39 above, in which the court carved out from the scope of an injunction the construction and operation of two offshore wind plants.

⁶⁵ Jorge L. Contreras and Jessica Maupin, 'Unenjoined Infringement and Compulsory Licensing' (2023) 37 Berkeley Tech LJ (forthcoming); Golden in Contreras and Husovec (n 63) 306-07.

and do business in Germany, and the resulting impact to the German economy. This last issue is particularly salient, given that in 2012 Microsoft shut down its German operations as a result of a German injunction in a SEP case that Microsoft eventually won in the U.S.,⁶⁶ and Chinese smartphone maker OPPO is reported to have withdrawn its products from the German market in response to the entry of a SEP-related injunction against it.⁶⁷ While such injunctions may encourage parties to negotiate and settle their disputes, as the recent SEP-related Munich injunction against Ford Motor Company apparently did,⁶⁸ it is not always clear that this will happen. The new proportionality defense under the German Patent Act gives parties and German courts more of an opportunity to consider these possible outcomes, whereas the competition/contractual framework available under *Huawei v ZTE* did not.

III. FRAND injunctions and proportionality in German law

1. FRAND and proportionality defenses: parallel applicability?

As noted in Section I., if the implementer of a standard is sued for infringement of an SEP before a court in the EU, it can raise the defense that it is entitled to a FRAND license ('FRAND defense').⁶⁹ Provided the requirements of such a defense – as established mainly by the CJEU in *Huawei/ZTE*⁷⁰ and the subsequent Member State case law⁷¹ – are fulfilled, the defense protects the implementer from an SEP-based injunction. Some argue that this FRAND defense takes precedence over the new Sec. 139(1)(3) GPA, meaning that a standard implementer cannot profit from a general proportionality defense in addition to a FRAND defense⁷² and that factual or legal aspects relevant to the FRAND defense cannot also be considered as part of the proportionality defense.⁷³ We respectfully disagree: the legal bases of the two defenses are different because the roots of the FRAND defense – as far as European law is concerned – are in competition law⁷⁴ and, at least according to some European

courts and commentators,⁷⁵ in contract law. Section 139(1)(3) GPA, on the other hand, is a patent law provision that explicitly translates proportionality, a fundamental principle of EU and German law,⁷⁶ to the patent branch of (intellectual) property law. Section 139(1)(3) GPA thus mitigates a disproportionate hardship the injunction would inflict, whereas the FRAND defense aims to prevent an abuse of market power and the breach of a contractual promise to license. These differences in doctrinal basis and purpose suggest, in and of themselves, a non-exclusive relationship between the FRAND and the proportionality defenses.

Furthermore, even though FRAND cases were prominent throughout the legislative process that led to the recent GPA amendments, neither the GPA nor the legislative materials contain any language that would bar the application of a general proportionality defense in FRAND cases. Nor does such a consequence result from overriding EU (competition) law. On the contrary, Sec. 139(1)(3) GPA can be seen as a measure to better align German patent injunction law with the proportionality requirement in Art. 3(2) EU Enforcement Directive.⁷⁷

Only the proportionality defense permits a court to consider a range of aspects which are quite important in the decision on whether to grant an unrestrained injunction, but which the FRAND defense cannot accommodate. An important example are third-party interests, especially those of third parties outside the implementer's chain of production and distribution.⁷⁸ This includes issues as weighty as public health, the maintenance of public infrastructure⁷⁹ and possibly sustainability and the environment. Strategic conduct or the market position of the litigating parties may not be fully reflected in the current FRAND assessment grid either. One example would be non-FRAND conduct – such as an excessive initial FRAND offer – by the SEP holder which does not, however, result in a successful FRAND defense because the court

⁷⁵ *Unwired Planet v Huawei* [2017] EWHC 711 (Pat), paras 98 f; Mary-Rose McGuire, 'Die FRAND-Erklärung – Anwendbares Recht, Rechtsnatur und Bindungswirkung am Beispiel eines ETSI-Standards' [2018] GRUR 128, 131 f, with references to French scholars advocating a contractual basis of the FRAND defense.

⁷⁶ The proportionality principle (*Verhältnismäßigkeitsgrundsatz*) is enshrined in art 19(4), art 14(1)(2) of the German Basic Law and, thus, part of the German Constitution; ss 242, 275(2) German Civil Code codify it specifically for civil law, including intellectual property law. On the EU level, art 3(2) Enforcement Directive in particular requires IP enforcement measures to be not only effective and dissuasive but also proportionate. See 'Gesetzentwurf der Bundesregierung, Entwurf eines Zweiten Gesetzes zur Vereinfachung und Modernisierung des Patentrechts (RegE PatMoG2)' 58 f with further references <https://www.bmj.de/SharedDocs/Gesetzgebungsverfahren/Dokumente/RegE_PatMoG2.pdf> accessed 16 February 2023.

⁷⁷ Ansgar Ohly, 'Stellungnahme zum Diskussionsentwurf des BMJV eines Zweiten Gesetzes zur Vereinfachung und Modernisierung des Patentrechts' (10 March 2020) <https://www.bmj.de/SharedDocs/Gesetzgebungsverfahren/DE/PatMoG_2.html> accessed 16 February 2023. On the impact of art 3(2) of the Enforcement Directive on national injunctions, see also Klaus Grabinski, 'Injunctive Relief and Proportionality in Case of a Public Interest in the Use of a Patent' [2021] GRUR 200, 201.

⁷⁸ On the relevance of third-party interests for the proportionality defense, see the wording of Sec. 139(1)(3) GPA and the legislative materials, RegE PatMoG2 (n 76) 62. Interests of third parties active in the sued implementer's value chain can matter for the FRAND defense, especially for whether a license to the implementer is necessary and sufficient to secure SEP access at FRAND conditions for the entire value chain; on this 'level selection' issue, see Regional Court Düsseldorf (Landgericht), 26 November 2020, 4c O 17/19, paras 19 f.

⁷⁹ RegE PatMoG2 (n 76) 62.

⁶⁶ *Microsoft v Motorola* 696 F 3d 872 (9th Cir 2012).

⁶⁷ See Matthieu Dhenne, 'OPPO's New FRAND Order: 'You got your injunction? Well, I quit' (French perspective)' (*Kluwer Patent Blog*, 16 September 2022) <<http://patentblog.kluweriplaw.com/2022/09/16/oppos-new-frand-order-you-got-your-injunction-well-i-quit-french-perspective/>> accessed 16 February 2023.

⁶⁸ cf Regional Court (Landgericht) Munich, 7 O 9572/21 – *Godo Kaisha IP Bridge 1 v Ford-Werke GmbH* (not published) <<https://www.avanci.com/2022/05/31/avanci-announces-patent-license-agreement-with-ford/>> accessed 16 February 2023.

⁶⁹ cf, for instance, Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477, para 54; German Federal Supreme Court, 5 May 2020, KZR 36/17, para 70 – *FRAND-Einwand*.

⁷⁰ Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477.

⁷¹ On Member State case law in the wake of *Huawei/ZTE*, see Peter Georg Picht, '„FRAND was 2.0“ – Rechtsprechung im Anschluss an die *Huawei/ZTE*-Entscheidung des EuGH' [2018] WuW 234 (part 1), 300 (part 2); Peter Georg Picht, Thomas F Cotter and Erik Habich (eds), *German FRAND case law in its international context* (forthcoming 2023).

⁷² Thomas Kühnen, *Handbuch der Patentverletzung* (15th edn, Carl Heymanns 2023) para D 529; Hubertus Schacht, 'Unverhältnismäßigkeit und Verletzerverhalten' [2021] GRUR 440, 445.

⁷³ This seems, however, to be the position of Schacht (n 72) 440, 444 f.

⁷⁴ Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477.

considers the implementer to be an unwilling licensee. Such conduct may nonetheless come to bear in a proportionality assessment. Regarding implementer conduct, at least the German courts are rather quick to find unwillingness to license.⁸⁰ Consequently, there are shades of unwillingness above this threshold which may matter from a proportionality perspective – an injunction may seem more proportionate against an implementer who refused for several years, and in spite of pertinent SEPs surviving validity challenges, to accept an evidently moderate license offer than against an implementer who took seven months to declare both its willingness to license under certain conditions and its – *bona fide* but incorrect – opinion that the patentee’s current offer was not FRAND. German courts would likely deny a FRAND defense to both implementers, though.⁸¹ Whether the patentee is an NPE or practices its SEPs would also seem to matter more for the proportionality analysis⁸² than for the FRAND⁸³ defense. And only the proportionality defense considers, as one of its core parameters, the extent of economic harm likely to be inflicted upon the implementer by an injunction.⁸⁴ This being said, these examples do not mean that a proportionality defense will always be successful if a described circumstance is present. On the contrary, in most cases it will – given its demanding requirements – likely fail.⁸⁵ They do show, however, that the assessment of this defense in addition to the FRAND defense can help to base the injunction decision on a more comprehensive consideration of the facts at issue. Consequently, it comes as no surprise, but as a cross-jurisdictional corroboration, that U.S. courts apply a fact-sensitive proportionality assessment in FRAND cases (see II.4. above).

Nor does the irreconcilability of their consequences for the injunction claim prevent a combined application of the two defenses. The assessment of the FRAND defense leads, essentially, to a binary result: either the defense succeeds and prevents an injunction altogether or it fails, and the court issues a full-fledged injunction. A proportionality defense, if successful at all, is most likely to give the implementer a sell-off or design-around grace period.⁸⁶ Only in very exceptional cases will it block an injunction altogether,⁸⁷ and such an outcome may be particularly rare in FRAND settings. Combining the effects of the two defenses results in three main alternatives, none of which seems unacceptable. If (i) the injunction is blocked by a FRAND defense, its possibly disproportionate effects are prevented as well. If (ii) the FRAND defense fails but the proportionality defense

secures a limitation or tailored injunction, such as providing a grace period for the infringer to work around or remove the infringing technology,⁸⁸ the latter defense has adjusted the result of the FRAND defense assessment, ensuring that it remains within the boundaries of the proportionality principle and thus compliant with EU law and German constitutional law. The same is true if – very exceptionally – (iii) the FRAND defense fails but the proportionality defense nonetheless blocks the injunction altogether. Certainly, courts will and should arrive at this last result only after a careful balancing of proportionality and its case-specific parameters against the patentee’s legitimate interests and the necessity to protect its constitutionally guaranteed intellectual property rights.⁸⁹ Proportionality is, however, not per se subordinate to the principles underlying the FRAND defense and may thus countervail them.

As a final remark, the applicability of Sec. 139(1)(3) GPA appears even more evident for settings which belong to the broader realm of FRAND but which do not actually subject the patentee to a (competition law-based) FRAND licensing obligation, for instance because the patentee did not make a FRAND commitment or fails to hold a dominant market position.

2. FRAND compensation payments (Sec. 139(1)(4) GPA)

Contrary to earlier legislative drafts,⁹⁰ the eventual wording of Sec. 139(1)(4) GPA obliges the infringer to financially compensate the patentee for a lost or curtailed injunction. The legal nature and technical details of this novel⁹¹ claim under German patent law have already generated lively debate.

a) State of discussion on non-FRAND settings

Wagner, for instance, perceives Sec. 139(1)(4) GPA as compensating the patentee for having to relinquish its injunction claim (sacrifice compensation claim – *Aufopferungsanspruch*)⁹² and calculates it not based on the value of the excluded injunction⁹³ but as a moderate surcharge to the patentee’s damages claims.⁹⁴ The surcharge would amount to 10-25% of the hypothetical license fee the parties would have *bona fide* agreed upon absent hold-up, i.e. before the infringer was locked into the patentee’s technology.⁹⁵

⁸⁰ See, for instance, *FRAND-Einwand* (n 69); German Federal Supreme Court, 24 November 2020, KZR 35/17 – *FRAND-Einwand II*.

⁸¹ *FRAND-Einwand* (n 69) especially paras 83, 92.

⁸² See below, III.3.

⁸³ See, for instance, Supreme Regional Court (Oberlandesgericht) Düsseldorf, 13 January 2016, I-15 U 66/15, para 11; Regional Court (Landgericht) Düsseldorf, 31 March 2016, 4a O. 73/14, para 189.

⁸⁴ See below, III.3.

⁸⁵ We do not, however, concur with categorical statements that it will never succeed; cf eg, FOSS Patents, ‘Standard-essential patent injunctions in Germany unaffected by amended statute: academic papers can’t paper over reform advocates’ abysmal failure to achieve anything useful’ (13 October 2022) <<http://www.fosspatents.com/2022/10/standard-essential-patent-injunctions.html>> accessed 16 February 2023, in direct reaction to, *inter alia*, an early draft of the present contribution.

⁸⁶ Christian Osterrieth, ‘Kriterien der Angemessenheit des Ausgleichs nach § 139 I 4 PatG’ [2022] GRUR 299.

⁸⁷ *ibid* 300.

⁸⁸ For a discussion of different injunction tailoring approaches used by courts in Europe and elsewhere, see Husovec and Contreras (n 62) 326-27.

⁸⁹ Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477, para 42; Hans D Jarass, ‘Art. 14 marginal No 8’ in Hans D Jarass, Bodo Pieroth and Martin Kment (eds), *Grundgesetz für die Bundesrepublik Deutschland: GG* (17th edn, CH Beck 2022).

⁹⁰ For further details, see Osterrieth (n 86) 300.

⁹¹ Ohly and Stierle (n 7) 1233; Osterrieth (n 86) 300.

⁹² Gerhard Wagner, ‘Die Aufopferung des patentrechtlichen Unterlassungsanspruchs’ [2022] GRUR 294, 298 f.

⁹³ On this approach, see Martin Stierle, ‘Zum Verhältnismäßigkeitsvorbehalt im patentrechtlichen Unterlassungsrecht’ [2022] Mitteilungen der deutschen Patentanwälte 486, 490.

⁹⁴ Wagner (n 92) 297.

⁹⁵ *ibid* 297.

Osterrieth's interpretation of the legal nature of Sec. 139(1)(4) GPA is similar,⁹⁶ but he calculates the claim differently, starting from the royalty for a hypothetical license to the infringer and increasing or decreasing this amount depending on the facts of the individual case, in particular on the factual parameters decisive for an injunction exclusion under Sec. 139(1)(3) GPA.⁹⁷ The hypothetical royalty would be determined in the same way courts determine a license analogy, in the framework and as one of the ways of calculating patent infringement damages.⁹⁸ Factors tending to increase the amount would be a high technical and economic value of the patent, use of the patented technology by the patentee itself, the infringer's lack of a freedom to operate analysis,⁹⁹ insufficient design-around efforts or a far-reaching curtailment of the injunction claim under Sec. 139(1)(3) GPA.¹⁰⁰ A low technical and economic value of the patent, a pure¹⁰¹ NPE business model of the patentee, its intentionally delaying the patent enforcement until investments have rendered the infringer more vulnerable,¹⁰² excessive pre-litigation royalty demands or the mere granting of a sell-off period under Sec. 139(1)(3) GPA, on the other hand, would likely decrease the amount.¹⁰³ If the patentee acquired the infringed patent merely for hold-up purposes, in order to monetize the injunction threat, Osterrieth would even reduce the compensation to zero, referring to similar language in the legislative materials.¹⁰⁴ To maintain proportionality, the compensation would have to be set off against the patentee's damages claims and, therefore, essentially secure a sort of advance payment to the patentee, prior to full redress for the infringement through damages.¹⁰⁵

Ohly suggests a different legal nature of Sec. 139(1)(4) GPA while presenting a calculation of the compensation that partly overlaps with Osterrieth's approach.¹⁰⁶ In his view, the compensation claim perpetuates, in a modified form, the precluded injunction (*Rechtsfortwirkungsanspruch*) and roots it in unjust enrichment law.¹⁰⁷ As the claim compensates the patent holder for the economic value of the protected technology which the infringer has tapped through its use of that technology, it entitles, in principle, the patentee to the royalties under a hypothetical license, negotiated *bona fide*

between parties willing to reach a license agreement.¹⁰⁸ Royalty calculation would hence not start from the license offer made by the patentee in the case at bar, as for instance Matthias Zigann suggests.¹⁰⁹ Appraisal of the hypothetical royalty's amount would depend on the facts of the individual case, such as the value of the infringed patent, design-around options, the legal certainty which the preclusion of an injunction awards to the infringer, the royalties agreed upon in comparable license agreements, investments made or additional IPRs owned and used by the infringer, and the competitive relationship between the parties.¹¹⁰ Just as similar unjust enrichment claims in German civil law, the compensation claim would have to be set off against the component of the patentee's damages claim which equally compensates it for the economic value of the protected technology (and is frequently also calculated by determining a hypothetical royalty).¹¹¹ Exceptionally, compensation payments could exceed the hypothetical royalty, in particular where third-party interests trigger Sec. 139(1)(3) GPA in spite of infringer conduct wrongful enough¹¹² to prevent – absent the third-party interests – an exclusion of the injunction.¹¹³ The preclusion of the injunction claim as such would, however, not usually justify a compensation increase because the injunction's threat potential already figures into the calculation of the hypothetical royalty.¹¹⁴ Conversely, patent enforcement strategies which violate good faith principles can, exceptionally, reduce the compensation claim, possibly even to zero.¹¹⁵ Hoffmann would also start from a hypothetical license royalty, but would triple this amount in order to disincentivize infringer inertia.¹¹⁶

b) Compensation and FRAND royalties

Against the background of this general discussion of Sec. 139(1)(4) GPA, we contend that, for FRAND cases, compensation should usually correspond to a FRAND royalty. This would be an adapted version of the license-based general approaches to Sec. 139(1)(4) GPA, contributing as such to a coherent set of rules for cases in and outside the FRAND area. Contrary at least to the approaches of Ohly¹¹⁷ and Osterrieth for non-FRAND settings, however, the hypothetical FRAND royalty should be the default compensation instead of a mere starting point which is then adjusted up- or downwards depending on a weighing of all circumstances of the case. This is because the standard-setting context and

⁹⁶ Osterrieth (n 86) 300.

⁹⁷ *ibid* 300, 302.

⁹⁸ *ibid* 301.

⁹⁹ On the relevance of this aspect, see also Begr. Aussch. f. Recht und Verbraucherschutz, BT-Drs. 19/30498, 61.

¹⁰⁰ Osterrieth (n 86) 301 f.

¹⁰¹ As opposed to an entity (eg a university, SME or individual inventor) that monetizes the patent but acquired it for this purpose from an initial patentee participating in innovation competition while lacking the resources or having other legitimate reasons not to enforce the patent itself; Osterrieth (n 86) 302.

¹⁰² For the relevance of an undue leveraging on the injunction's threat potential, see also Begr. Aussch. f. Recht und Verbraucherschutz BT-Drs. 19/30498, 61.

¹⁰³ Osterrieth (n 86) 301 f.

¹⁰⁴ *ibid* 301; BT-Drs. 19/30498, 61.

¹⁰⁵ *ibid* 302.

¹⁰⁶ Ansgar Ohly, 'Der Ausgleichsanspruch gemäß § 139 I 4 PatG als Rechtsfortwirkungsanspruch' [2022] GRUR 303.

¹⁰⁷ *ibid* 304, pointing in particular to a contiguity between s 139(1)(4) GPA and ss 951(1)(1), 812(1)(1)(2) German Civil Code.

¹⁰⁸ *ibid* 304, 306; see also Ohly and Stierle (n 7) 1235 with further references.

¹⁰⁹ This approach was suggested by Judge Matthias Zigann at a CIPLITEC online event also attended by the author of this section, cf. <<https://www.ciplitec.de/veranstaltung/der-patentrechtliche-unterlassungsanspruch-nach-dem-2-patmog/>> accessed 16 February 2023.

¹¹⁰ Ohly (n 106) 307.

¹¹¹ *ibid* 307 f.

¹¹² As an example, Ohly (n 106) 306, 308, refers to an infringer that omits a freedom to operate analysis, knowingly accepting patent infringement risks and/or speculating that third-party interests will preclude an injunction.

¹¹³ *ibid* 306.

¹¹⁴ *ibid* 307.

¹¹⁵ *ibid* 308.

¹¹⁶ Hoffmann (n 12).

¹¹⁷ One could, however, read Ohly (n 106) 307, as supporting our approach for the FRAND-context.

the existence of a FRAND declaration suggest that the law should enable an implementer, against whom an injunction would be disproportionate, to use the pertinent SEP(s) on FRAND conditions, even if its FRAND defense failed, forcing the implementer to rely on the proportionality defense. Looking instead at the value of the avoided injunction or a royalty offer made by the patentee could yield excessive payment obligations, especially¹¹⁸ in the FRAND context. This is because use of a ‘true’ SEP¹¹⁹ constitutes a precondition for the implementer’s access to the related standard-based markets. The economic value of avoiding an injunction could therefore be as high as the entire return from the implementer’s business activity in these markets.

Properly determining FRAND royalties can doubtless present formidable challenges and require substantial resources. But this fact provides no valid argument against our suggestion. For one thing, neither of the other approaches discussed above escapes similar intricacies. On the contrary, merely starting from the FRAND royalty level and regularly adjusting it up- or downwards based on a multitude of factors would seem to add a layer of complexity and effort to the FRAND royalty determination. Since a license analogy is one of the major methods for calculating patent damages, not even Wagner’s damages surcharge model would always escape such a determination exercise. Furthermore, the concept of ‘appropriate compensation’ seems to allow for greater flexibility than, for instance, a damages calculation that rigidly tries to avoid under- or overcompensation of the harmed party. In their FRAND determination under Sec. 139(1)(4) GPA courts should therefore have some discretion to estimate royalty levels, with a view to avoiding undercompensation of a patentee that already has to accept the curtailment of its injunction claim.

There is a risk that implementers are encouraged to hold out and delay entering into a licensing agreement when the worst penalty they can suffer if their FRAND defense fails is the payment of a FRAND royalty. We do not think that our approach invites holding out in that way. First, our discussion of proportionality parameters in a FRAND context (see 3. below) shows that the proportionality defense will by no means save all unwilling licensees from an injunction. Second, Sec. 139(1)(5) GPA reserves the patentee’s right to infringement damages in addition to compensation under Sec. 139(1)(4) GPA. An infringer that does not succeed with its FRAND defense will usually have acted negligently – though not necessarily with the gross negligence that would block a proportionality defense¹²⁰ (see 3.e) below) – and

thus fulfill the culpability requirement for damages claims under Sec. 139(2)(1) GPA. Hence, the SEP owner can select from the traditional triad of calculation methods, namely (i) actual damages suffered, including lost profits, (ii) hypothetical royalties and (iii) disgorgement of infringer’s profits.¹²¹

As FRAND rules come into play, however, regard must be had to the German Federal Supreme Court’s dictum that no damages above the level of FRAND royalties can be claimed for periods of time during which the SEP holder itself failed to show FRAND conduct by refusing to license at all or refusing to submit a FRAND license offer to the infringing implementer.¹²² This rule also stands in the way of Wagner’s suggestion to calculate the compensation under Sec. 139(1)(4) GPA as a fixed surcharge to the amount of damages due. On the other hand, the Federal Supreme Court’s position squares nicely with the view that previous inequitable conduct should figure into the balancing of considerations and interests that forms part of the proportionality defense (‘*tu quoque*’ consideration).¹²³ To a FRAND-compliant patentee, however, the damages claim provides the opportunity to collect damages or infringer profits above the FRAND royalty level. This would include, for instance, profits made through transactions with third parties for the sake of which the proportionality defense was granted in the first place.

Using FRAND royalties as the point of reference has the additional advantage of bringing German practice in better sync at least with U.S. law, thereby reducing incentives for forum shopping and parallel litigation, as well as giving German courts the benefit of numerous judicial decisions involving many of the same parties litigating in Germany. Specifically, under U.S. law, courts adjudicating FRAND royalty disputes have focused on determining the contractual meaning of FRAND, because the source of the FRAND obligation is an SDO policy that is interpreted as a contractual document. As such, the terms ‘fair’ and ‘reasonable’ are interpreted as a matter of contract law. However, because SDO policies typically offer little additional guidance regarding the meaning of these terms, courts look to extrinsic evidence of the parties’ intention in agreeing to charge royalties at a FRAND level. In the U.S., courts need not look far, as the statutory measure of damages in patent infringement cases is also a ‘reasonable royalty’.¹²⁴ Thus, several U.S. courts have conducted their FRAND royalty determination using methodologies and theories borrowed from patent damages law.¹²⁵ Given how difficult it is to determine FRAND royalties in a given case, additional data points from U.S. case law come in handy provided they have – as we suggest – strong indicative value for a FRAND royalty-based compensation under Sec. 139(1)(4) GPA.

Whether only the patent in suit or the entire SEP portfolio forms the basis for calculating the appropriate compensation in FRAND cases is a tricky issue. On the one hand,

¹¹⁸ On flaws of the injunction value approach in general settings, see for instance Ohly (n 106) 306 f.

¹¹⁹ The term SEP is used, somewhat loosely, for types of standard-related patents whose essentiality can vary considerably: some patents are declared as standard-essential even though they are not valid or do not cover a part of the respective standard; some patents do cover part of the standard but not a technology the particular implementer needs to employ for his products or services; for others there is an easy work-around available which does not endanger compatibility with the rest of the standard. SEPs in the narrow sense, however, are valid and cover a technology the implementer must use to be compliant with the standard. For an assessment of standard-essentiality in this sense, see *FRAND-Einwand* (n 69) paras 55 f.

¹²⁰ cf Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, paras 200 f. In this case, the court awarded damages and held the infringer to be negligent, thereby confirming the stern approach German courts usually take to this point. While also rejecting a proportionality defense, the court did not discuss the infringer’s negligence as a central reason for this rejection but focused on other factors.

¹²¹ Peter Mes, *Patentgesetz Gebrauchsmustergesetz* (5th edn, CH Beck 2020) § 139 paras 127, 178.

¹²² *FRAND-Einwand* (n 69) paras 110 f.

¹²³ Schacht (n 72) 440, 441 f.

¹²⁴ 35 USC § 284.

¹²⁵ Contreras and others (n 15) 162-63, Jorge L. Contreras and Richard J. Gilbert, ‘A Unified Framework for RAND and other Reasonable Royalties’ (2015) 30 Berkeley Tech LJ 1447.

limiting hypothetical royalty calculation to the patent in suit is the usual approach outside the FRAND area.¹²⁶ Portfolio calculation is not a common exercise in patent law. On the other hand, it is a typical and arguably efficient strategy to litigate only selected SEPs in order to fight infringement, and for the taking of a license, regarding entire SEP portfolios. German courts at least have in a way acknowledged this context by holding that (global) portfolio licenses are FRAND, whereas an implementer's readiness to only license 'patent by patent', i.e. (summarily speaking) to take a license only for SEPs upheld in court, is not.¹²⁷ If an implementer succeeds with its FRAND defense, it will thus usually be obliged to take and pay for an SEP portfolio license. If so, why should the appropriate compensation under Sec. 139(1)(4) GPA consist of an (adjusted) royalty merely for the patent(s) in suit when the FRAND defense failed and the implementer has to rely on the proportionality defense? As these reflections show, calculating portfolio-based compensation seems to be the more suitable approach, at least for certain FRAND settings.

3. Parameters for assessing proportionality in FRAND cases

As already said, the proportionality assessment under Sec. 139(1)(3) GPA is a fact-intensive one that looks at all circumstances of the particular case. Nonetheless, the legislative materials and the discussion of the provision's application in general have already pointed out aspects which typically matter for this assessment. In this section, we explain how this grid of criteria should take specific shape in FRAND settings and provide a non-exclusive list of additional, FRAND-specific parameters.

a) Onus on the infringer

*Generally:*¹²⁸ Unless the infringer can prove exceptional circumstances, the patentee's interest in receiving the injunction prevails. Any uncertainties over whether an injunction would be disproportionate are resolved in favor of the patentee.¹²⁹

FRAND context: The FRAND commitment as such would seem to render the patentee's interest in the injunction less worthy of protection.¹³⁰ However, this does not apply to settings in which the infringer cannot successfully raise a FRAND defense. In such settings, the general rules does therefore prevail.

b) Patent value/function vs. injunction impact

*Generally:*¹³¹ If the patent covers only a minor part of a complex product, which part is not necessary for the

product to function, and if a design-around requires much time and investment (whether due to technical issues or legal requirements for market admission), the economic consequences of an injunction, e.g. a protracted interruption of production, can be out of proportion to the value of the infringed patent and, exceptionally, justify the exclusion of an injunction. More generally, large investments in a product, for instance due to lengthy R&D, may lead to exceptionally severe economic consequences of an injunction. This impending harm may be completely out of proportion to the value of the enforced patent, justifying in particular a sell-off period. The comparison between patent value and affected end product as exercised by U.S. courts corroborates the suitability of this parameter.¹³²

FRAND context: The complex product parameter is particularly relevant to many FRAND disputes. Think of modules that implement standards for wireless digital communication and are embedded in products with a broad range of functionalities. For the core functionalities of some IoT products (e.g. 'smart' refrigerators or clothing with 'smart' labels), such standard-implementing modules will be less essential than, say, for a mobile communication handset. In theory at least, design-arounds are much less of an option for mitigating injunction-inflicted harm if and because the design-around would deprive the product of its standard compatibility. In practice, designed-around products may still be able to smoothly implement a sufficient part of the standard and interact with other standard-based devices. To be a viable business alternative, however, they must also receive customer acceptance. Fact-sensitive as a standard-implementing component's functional essentiality and design-around options¹³³ are, the general complex product parameter will nonetheless be present in a substantial percentage of FRAND cases. This is not to mean, however, that sell-off periods or other injunction limitations should automatically be granted in these cases. It is a core purpose of the FRAND licensing mechanism to prevent undue leverage resulting from exclusive rights (SEPs) to complex product components, while securing appropriate commercialization opportunities for the owners of such rights. Having been unwilling to take a FRAND license and to thus secure the FRAND defense, suppliers of complex, standard-implementing products should not be allowed to take for granted the safe harbor of a proportionality defense. Without additional factors (e.g. excessive royalty demands), the complex product parameter ought not, therefore, justify excluding SEP injunctions.

c) Remaining protection term

Generally: A short remaining patent protection term at the time the court decides on the injunction disfavors a proportionality defense in two ways. First, it reduces the negative impact of the injunction on the infringer's business.¹³⁴ Second, a grace period would more likely be

¹²⁶ cf, for instance, Ohly and Stierle (n 7) 1235.

¹²⁷ *FRAND-Einwand* (n 69) para 96.

¹²⁸ RegE PatMoG2 (n 76) 60.

¹²⁹ cf also, on the infringer's burden to substantiate concrete harm resulting from an injunction, Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 168.

¹³⁰ This conclusion has been reached by several U.S. courts that have considered the matter. See, eg, *Apple v Motorola* 757 F 3d 1286, 1332 (Fed Cir 2014) ('a patentee subject to FRAND commitments may have difficulty establishing irreparable harm').

¹³¹ RegE PatMoG2 (n 76) 61.

¹³² See, eg, *Apple v Samsung* 809 F 3d 633 (Fed Cir 2015) (for complex, multi-component products, patent holders must show some nexus between the patented feature and consumer demand for the product in order to obtain an injunction).

¹³³ For their relevance in a U.S. law proportionality assessment, see also II.1. above.

¹³⁴ Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 168.

tantamount to the complete refusal of an injunction if and because an enforceable patent no longer exists at the end of the grace period.¹³⁵

FRAND context: The general considerations regarding the remaining patent term seem appropriate for the FRAND context as well, though, as noted in Section 2.b) above, many FRAND disputes revolve around complex products that are covered by multiple SEPs and other patents. The larger the patentee's portfolio, the less relevant the expiration of any one patent is to either the patentee or the infringer. Thus, in the context of some FRAND cases, this consideration does not seem, factually, to weigh heavily in favor of either party.¹³⁶

d) Practicing patentee vs. NPE

*Generally:*¹³⁷ It weighs in favor of an injunction if the patentee practices the patent by producing, or having others produce for it, patented products that compete with the infringer's products. Correspondingly, patentees (such as NPEs) that merely monetize the patent without practicing the protected invention have, in principle, a legitimate interest in collecting royalties for their patent rather than in terminating its use by others. This principle is present in U.S. case law as well.¹³⁸ However, the fact that the patentee does not practice the patent is not in and of itself sufficient to justify a grace period for the infringer,¹³⁹ especially where individual inventors, universities or SMEs – i.e. players that tend neither to have much bargaining power nor pursue 'patent trolling' strategies – commercialize their patents with the help of third parties.

FRAND context: FRAND settings can generate specific modalities of patent practice. One may even ask whether making one's technology available for standardization is a form of practicing the respective patent. As one technical standard frequently supports several standard-based markets (e.g. the markets for base stations and handsets), SEP owners may employ their patented technology in another market than the infringer. However, such activities do not fulfill the general proportionality defense requirement of producing an article that competes with the infringing product, and, indeed, economic losses sustained by the patentee will usually be smaller

¹³⁵ *ibid* para 171.

¹³⁶ It is worth noting, however, that many FRAND cases both in the U.S. and Europe have been found to be brought by NPEs using a small number of SEPs that have been assigned to them by standards developers with much larger portfolios. See Jorge L. Contreras and others, 'Litigation of Standards-Essential Patents in Europe: A Comparative Analysis' (2017) 32 Berkeley Tech LJ 1456.

¹³⁷ RegE PatMoG2 (n 76) 60.

¹³⁸ In *eBay* 547 US 388 (2006), Justice Kennedy, in a concurring opinion, noted with concern that '[a]n industry has developed in which firms use patents not as a basis for producing or selling goods but, instead, primarily for obtaining licensing fees' (p 396). He feared that such entities could use injunctive relief as 'a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent' (*ibid*). Accordingly, Justice Kennedy appears to recommend that lower courts view requests for injunctive relief by such entities with skepticism.

¹³⁹ *cf* also Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 167, where the court did not consider it to weigh in favor of a proportionality defense that the patentee did not itself practice the patent by manufacturing products similar to the infringing product; similar Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 52.

when it and the infringer operate on different markets. The aforementioned general definition of a practicing patentee will turn many SEP holders into NPEs for the purpose of a proportionality defense assessment. Even without this interpretive gloss, it remains a fact that many FRAND suits in both Germany and the U.S. have recently been found to be brought by NPEs.¹⁴⁰ However, at least German¹⁴¹ courts have held explicitly that the NPE business model is not in and of itself a reason to disfavor a SEP owner's petition for an injunction.¹⁴² Prototypical FRAND settings are crucially different from general proportionality settings in that the owner of a FRAND-encumbered SEP must grant a license, but only to an implementer willing to take one, on FRAND conditions. Using an injunction to permanently bar the infringer, in spite of its willingness to license, from using the patented technology does not comply with this concept. Consequently, the injunction granted to an SEP owner is a way to bring about a FRAND license, should the implementer wish to take one and remain in the market, rather than a way to terminate the implementer's market and technology access. These reflections show that the differentiation between practicing patentees, for which injunctions should be more readily available, and non-practicing patentees, which should license instead of enjoining, does not work as well in FRAND settings. The corresponding parameter in a proportionality defense assessment is therefore less relevant in FRAND settings.

e) Undue patentee conduct

*Generally:*¹⁴³ Courts may exclude injunctions when the patentee seeks to coerce the infringer into paying excessive royalties. A finding of bad faith conduct by the patentee points in the same direction, e.g. a strategy of deliberately and unnecessarily delaying¹⁴⁴ the enforcement of the patent until the infringer has made substantial investments.

FRAND context: At first sight, the excessive royalties parameter seems irrelevant to FRAND settings, given that injunctions attempting to impose such excessive demands should be blocked by the FRAND defense already, without the need to invoke a proportionality defense. However, courts that apply a rigid step-by-step assessment of whether the parties' conduct complied with the *Huawei/ZTE* negotiation protocol may consider an implementer recalcitrant, and reject its FRAND defense, merely due to the implementer's lack of responsiveness, without assessing the FRAND compliance of the patentee's license offer.

¹⁴⁰ See Contreras and others in Bradford Biddle and others (n 15).

¹⁴¹ See, for instance, Supreme Regional Court (Oberlandesgericht) Düsseldorf, 13 January 2016, I-15 U 66/15, para 11; Regional Court (Landgericht) Düsseldorf, 31 March 2016, 4a O 73/14, para 189.

¹⁴² See Jorge L. Contreras and Peter Georg Picht, 'Are PAEs Different? The Legal Treatment of Patent Assertion Entities in Europe and the United States' (2018) 2 IEEE Communication Standards 80.

¹⁴³ RegE PatMoG2 (n 76) 60 f.

¹⁴⁴ Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 163, confirms the relevance of delayed litigation, though finding no relevant delay in the case at bar; along the same line Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, paras 50, 52, where the infringing product was already on the market at the time the patent was granted.

In such cases, it seems possible that the injunction claim will survive a FRAND defense, even though the patentee demands excessive royalties. The parameter should then loom large in a subsequent proportionality assessment, given that the patentee has, after all, promised to license on FRAND terms.

In the same vein, courts should consider undue enforcement delays, even though they need not do so to sustain a FRAND defense, at least as part of their proportionality assessment. Given that European case law has, thus far, established no rule for when a FRAND-compliant patentee should initiate the *Huawei/ZTE* protocol by way of its notice of infringement, such settings seem of more than theoretical relevance. At the same time, market realities must figure in as well. Important technical standards are implemented by a large number of companies, but the percentage of them that voluntarily and proactively license SEPs may be much smaller.¹⁴⁵ Even leading SEP holders have limited enforcement resources and cannot approach all implementers at once. Therefore, staggered enforcement or a considerable lapse of time between standard implementation and initial enforcement steps vis-à-vis a particular implementer provides no *per se* indication of delaying tactics. Nor should the aspect of whether an implementer's product has already entered the market (on its U.S. relevance, see II.1. above) acquire a dispositive significance.

f) Infringer diligence

*Generally:*¹⁴⁶ It matters for the proportionality assessment whether the infringer took reasonable steps to avoid patent infringement, for instance through an appropriate freedom to operate (FTO) analysis, and whether it made sufficient efforts to obtain a license.¹⁴⁷ The case law principles developed under Sec. 24(1) GPA, with regard to the licensing efforts necessary as a precondition for a compulsory license according to this provision, apply to proportionality defense settings as well.¹⁴⁸ Hence, feigned or non-serious licensing negotiations (for instance because the infringer really aims at a compulsory license instead of a negotiated license) are insufficient.¹⁴⁹ On the other hand, the infringer must have leeway to negotiate according to its business interests and decisions; willingness to license requirements must not be overly demanding, especially in international settings that may involve parties with differing backgrounds, mentalities, cultures, etc.¹⁵⁰ If the infringing product is a life-saving drug, there is a heightened obligation on the infringer to try to avoid an injunction, in particular by working towards offering an

alternative, non-infringing product or – in case of regulatory hurdles – by seriously seeking a license from the patentee.¹⁵¹ If the infringer acted with intent or gross negligence, the proportionality defense will usually fail.¹⁵²

FRAND context: The CJEU has pointed out how difficult FTO analyses can be for standard-based products.¹⁵³ As a remedy, its *Huawei/ZTE* negotiation protocol obliges patentees to notify implementers of a perceived infringement.¹⁵⁴ Member State courts have fleshed out the information a patentee needs to provide in the negotiation process.¹⁵⁵ If an implementer receives such notice and information without subsequently undertaking a thorough FTO analysis of its own and seeking a FRAND license if the analysis indicates infringement, this could indicate intent or gross negligence on the part of the infringer. As regards the license-seeking efforts an infringer is required to make, the concept of a 'willing licensee', as specified in FRAND case law, will likely replace the – arguably lower and less detailed – threshold developed under Sec. 24(1) GPA. It would seem contradictory, in fact, if the proportionality assessment measured infringer conduct by a different, more permissive, yardstick than the FRAND defense.

g) Third-party interests – compulsory license application

*Generally:*¹⁵⁶ Negative impacts on third-party interests are a usual consequence of injunctions and not *per se* sufficient to exclude them. This changes only where the injunction creates an exceptional hardship that outweighs the interests of the patentee. Examples are disruptions in the supply of life-saving products¹⁵⁷ or a severe impairment of crucial infrastructure. According to the legislative concept, such exceptional hardship for third parties could in itself justify an injunction limitation.

Initial German case law on Sec. 139(1)(3) GPA has, however, taken an even more restrictive approach by admitting a proportionality defense, which is based on third-party interests, only if the infringer failed with the previous request for a compulsory license according to Sec. 24(1) GPA.¹⁵⁸ Such requests need to be filed with the Federal Patent Court (*Bundespatentgericht*), i.e. not the court ruling on the infringement of a given patent but the court mainly dealing with patent validity. This provision states that 'the non-exclusive authorization to commercially use an invention shall be granted by the Federal Patent Court in an individual case in accordance with the following provisions (compulsory license) where, 1, a license seeker has, within a reasonable period of time, unsuccessfully attempted to obtain permission from the proprietor of the patent to use the invention on reasonable commercial terms and

¹⁴⁵ Jorge L. Contreras, 'Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing' (2013) 79 *Antitrust LJ* 47, 62 ('many patent holders that are engaged in standards development do not actively seek to license or enforce their SEPs').

¹⁴⁶ RegE PatMoG2 (n 76) 61.

¹⁴⁷ Regional Court (Landgericht) Düsseldorf, 30 June 2022, 4b O 7/22, para 171, on the infringer's obligation to seek a license in a timely manner; Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 50.

¹⁴⁸ Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 55.

¹⁴⁹ *ibid* para 56.

¹⁵⁰ *ibid* para 57.

¹⁵¹ *ibid* para 50.

¹⁵² For the taking into consideration of infringer intent under U.S. law, see II.1. above.

¹⁵³ Case C-170/13 *Huawei/ZTE* ECLI:EU:C:2015:477, para 62.

¹⁵⁴ *ibid*, para 60.

¹⁵⁵ See, for instance, *FRAND-Einwand* (n 69) paras 84 f.

¹⁵⁶ On the following, see RegE PatMoG2 (n 76) 62.

¹⁵⁷ For U.S. jurisprudence on this, see II.2. above.

¹⁵⁸ Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 42. For a concurring view, see Grabinski (n 77) 200, 202.

conditions,¹⁵⁹ and 2, the public interest calls for the grant of a compulsory license'. Furthermore, Sec. 24(5)(1) GPA stipulates that 'where the proprietor of the patent does not apply the patented invention in Germany or does not do so predominantly, compulsory licenses in accordance with subsection (1) may be granted to ensure an adequate supply of the patented product on the German market'.

In its early leading case, the Düsseldorf Regional Court rejected a proportionality defense – even with regard to a mere sell-off period – and issued an injunction against a drug on which, *inter alia*, patients suffering from severe liver cirrhosis depended.¹⁶⁰ In essence, the court argued that the proportionality defense must not be used to circumvent the compulsory license requirements under Sec. 24 GPA.¹⁶¹ The notions of public interest in Sec. 24(1) GPA and third-party interests relevant for the proportionality defense will frequently overlap.¹⁶² However, courts in infringement proceedings do not possess the technical knowledge necessary for deciding, as part of their proportionality assessment, whether the requirements for a compulsory license are fulfilled.¹⁶³ The court even seems to assume some sort of fiduciary role which the infringer has *vis-à-vis* patients that have come to rely on its infringing product, and which renders it bearable for the infringer to have to file for a compulsory license,¹⁶⁴ even in interim proceedings according to Sec. 85 GPA.¹⁶⁵ At the same time, it is not entirely clear whether the court would permit a proportionality defense without a prior, unsuccessful compulsory license request, to be filed in separate proceedings, where the license request would evidently fail. The court cites a source which says as much, states that it agrees with the author, but subsequently only speaks about the need for a compulsory license request in separate proceedings.¹⁶⁶ In any case, the unsuccessful compulsory license request as a precondition for a successful proportionality defense seems to remain limited to defenses which exclusively rely on third-party interests.¹⁶⁷ Furthermore, the court indicates that its view on the precedence of Sec. 24(1) GPA may not prevail and goes on to assess whether the proportionality defense would be successful irrespective of a previous compulsory license request.¹⁶⁸ It finds, however, that this is not the case. Even though third-party interests, namely the interests of patients depending on the drug at issue and suffering a severe hardship from the injunction,¹⁶⁹ were significant, they could not, in the court's view, support a proportionality defense on their own, without having regard to the infringer's conduct.¹⁷⁰ This conduct

reflected an insufficient effort to receive a license.¹⁷¹ The appeal against this decision is currently pending.

With a view to U.S. case law (see above, II.1.) and the global challenge of climate change, one should consider adding sustainability to the picture, but without exempting products from injunctions simply because they are (declared to be) sustainable or sustainability-enhancing. Just as under U.S. law, it cannot be sufficient merely to claim third-party interests or provide anecdotal evidence for them. The infringer's onus is to produce 'solid proof', including the unavailability of alternatives. U.S. case law also emphasizes the availability of domestic alternatives for an enjoined product as a key element of the third-party interest parameter.

FRAND context: Though customers will often be inconvenienced by the unavailability of a standardized product after the entry of an injunction, this cannot per se render the injunction disproportionate, lest hold-out becomes the strategy of choice for implementers and short-term customer convenience puts long-term dynamic efficiency at risk.¹⁷² The latter aspect was recognized by U.S. courts as a 'public interest in the rights secured by valid patents', though courts and agencies in the U.S. have also recognized a public interest in the availability to consumers of standardized products (see II.2. above). Moreover, the digital transformation of our economies and societies broadens the range of settings in which SEP injunctions may disrupt vital supply, e.g. of 'smart' medical devices or of basic infrastructure (electricity, water, transportation) provided with the help of 'smart' equipment. From U.S. case law (see above, II.3.), we learn that the communication infrastructure of emergency first responders can be at stake as well. In such cases, proportionality limitations can become appropriate notwithstanding the unavailability of a FRAND defense. It may well be that German courts establish, for non-FRAND cases, the unsuccessful request of a compulsory license as a precondition for a proportionality defense that relies (exclusively) on third-party interests. The requirements for a FRAND license, and a successful FRAND defense, are different from Sec. 24(1) GPA in that they do not include the public interest as a necessary component,¹⁷³ whereas they arguably demand more (e.g. swifter reaction, unconditional acceptance of whatever terms are FRAND) in terms of implementer willingness to license. Accordingly, the German Federal Supreme Court has ruled that the compulsory license under Sec. 24 GPA and the FRAND defense/claim to a license coexist.¹⁷⁴ Therefore, and even though the relationship between FRAND and Sec. 24(1) GPA awaits further clarification,

¹⁵⁹ On the option to seek such permission even during the period between filing the action for a compulsory license and the end of the oral hearings in that action, see Grabinski (n 77) 200, 202.

¹⁶⁰ Regional Court (Landgericht) Düsseldorf, 7 July 2022, 4c O 18/21, para 53.

¹⁶¹ *ibid* para 45.

¹⁶² *ibid* para 45.

¹⁶³ *ibid* para 45.

¹⁶⁴ *ibid* para 46.

¹⁶⁵ *ibid* para 59.

¹⁶⁶ *ibid* paras 44 f.

¹⁶⁷ *ibid* paras 42 f.

¹⁶⁸ *ibid* para 48.

¹⁶⁹ *ibid* para 59.

¹⁷⁰ *ibid* para 50.

¹⁷¹ *ibid* paras 54 f.

¹⁷² *cf* also the U.S. case law (II.2.) above, which explains that the interests to, on the one hand, incentivize standard-setting participation while, on the other hand, also maintaining access to standard-based products can point both ways in a proportionality assessment.

¹⁷³ *cf* also Reto M Hilty and Peter R Slowinski, 'Standartessentielle Patente – Perspektiven außerhalb des Kartellrechts' [2015] GRUR Int 781, 787, describing that current case law tends to exclude public economic interests, such as a better supply of the domestic market, from the scope of Sec. 24(1) GPA.

¹⁷⁴ German Federal Supreme Court, 13 July 2004, KZR 40/02 – *Standard-Spundfaß*.

a previous compulsory license request may become a requirement for successful proportionality defenses in FRAND cases as well, provided they rely exclusively on third-party interests of the sort to which Sec. 24(1) GPA applies. For defenses which rely on a combination of third-party interests with other factors, or on third-party interests which do not qualify as ‘public interest’ in the sense of Sec. 24(1) GPA, this would not be the case.

h) SDO outsiders and FRAND-free SEPs

It can happen that owners of patents which are essential to industry standards have not participated in the standards development process and are not members of the relevant SDO. These ‘outsiders’ would usually not make FRAND commitments for their SEPs.¹⁷⁵ Whether competition law subjects them to a FRAND licensing obligation nonetheless has, at least for Europe, not yet been definitively settled.¹⁷⁶ In any case, the absence of a FRAND commitment increases the significance of the proportionality defense. In particular, the complex product parameter (potentially no longer mitigated by a FRAND licensing obligation) can point towards a proportionality-based (partial) exclusion of the injunction.

i) Undisclosed SEPs

Some SDOs¹⁷⁷ require that SEP holders disclose their SEPs during the standardization process, and the failure to make such disclosure violates the SDO’s rules.¹⁷⁸ An SDO participant’s failure to disclose SEPs when required to do so, and then to seek to license those SEPs to implementers on FRAND terms or otherwise, is sometimes referred to as ‘patent ambush’.¹⁷⁹ U.S. courts have imposed severe penalties on SDO participants that have failed to make required SEP disclosures, in some cases rendering those SEPs unenforceable with respect to implementations of the relevant standard.¹⁸⁰ The EU Commission has also sanctioned such conduct by way of licensing obligations.¹⁸¹ In a proportionality assessment, undue patentee conduct in the form of a patent ambush can weigh in favor of (partially) excluding an injunction.

¹⁷⁵ See Jorge L Contreras, ‘When a Stranger Calls: Standards Outsiders and Unencumbered Patents’ (2016) 12 J Comp L & Econ 507.

¹⁷⁶ On the state of discussion, see Peter Georg Picht, ‘In rem effects of licensing declarations’ in Matthias Lamping and others (eds), *Festschrift Hanns Ullrich* (forthcoming 2023).

¹⁷⁷ Such disclosures are required by several important SDOs in the ICT sector including ETSI, ISO and IETF, but are not required, for example, by IEEE. For a discussion and catalog of these different SDO policies, see Rudi Bekkers and Andrew Updegrave, ‘IPR Policies and Practices of a Representative Group of Standards-Setting Organizations Worldwide’ (17 September 2013) <<http://dx.doi.org/10.2139/ssrn.2333445>> accessed 16 February 2023.

¹⁷⁸ cf *Rambus* (Case COMP/38.636) Commission Decision 2010/C 30/09 [2010] OJ C30/17.

¹⁷⁹ See Daryl Lim, ‘Unilateral Conduct and Standards’ in Jorge L Contreras (ed), *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust and Patents* (CUP 2017) 47.

¹⁸⁰ See *ibid* (discussing antitrust, equitable and other remedies awarded by courts and enforcement agencies for instances of patent ambush).

¹⁸¹ *Rambus* (n 178). In this case, the patentee had partially to license for free.

j) Global license determination pending

The taking of a global license by the implementer has now been acknowledged by many courts as an appropriate way to license SEPs on a FRAND basis.¹⁸² A number of jurisdictions have shown a readiness to determine the conditions of such global licenses,¹⁸³ as well as confidence that they are entitled to do so, even though the licenses also cover patents granted by foreign jurisdictions.¹⁸⁴ Arbitration may also lead to the setting of a global license.¹⁸⁵ Pending arbitration or state court proceedings with the purpose of setting a global FRAND license do not necessarily prevent German courts from adjudicating injunction claims based on the infringement of a domestic patent.¹⁸⁶ If, however, such a binding global license determination appears imminent and promises results that are appropriate, this ‘pending global license’ parameter can favor a proportionality-based grace period until the global license is set, especially because Sec. 139(1)(4), (5) GPA entitle the patentee to collect (at least) FRAND royalty payments for the period until the determination takes effect.

k) Relative economic strength of patentee and infringer

As mentioned above (see II.1.), some U.S. case law weighs the impact of issuing or not issuing an injunction on the infringer and the patentee respectively, with ‘small guy protection’ as a resulting tendency. Such a parameter can be expected to impact a prototypical setting in the unfolding IoT economy, namely the licensing demands, or else injunction threats, by incumbent holders of ICT SEPs vis-à-vis small IoT device producers. Burdensome as such requests may be for their recipients, German courts should not systematically use the proportionality defense to protect small businesses or recent market entrants. For one thing, even these market participants must, in the interest of dynamic efficiency, accept, or be educated to accept, the costs of fairly compensating other players’ innovations into their business and market entry calculations.

l) Industrial policy and broader competition concerns

From the (traditional) perspective of German patent case law, it is interesting but also unfamiliar to notice U.S. case law’s sensitivity to concerns that injunctions may render the domestic market less attractive to investors or that they may cement a patent holder’s market power. While patent injunctions may have such effects under certain circumstances, neither the legislature nor German patent

¹⁸² *FRAND-Einwand* (n 69) para 78; *Unwired Planet v Huawei* [2017] EWHC 711 (Pat), especially para 175.

¹⁸³ Maximilian Haedicke, ‘Anti-Suit Injunctions, FRAND Policies and the Conflict between Overlapping Jurisdictions’ [2022] GRUR International 101.

¹⁸⁴ See Jorge L Contreras, ‘Anti-Suit Injunctions and Jurisdictional Competition In Global FRAND Litigation: The Case For Judicial Restraint’ (2012) 11 NYU J Intell Prop & Ent L 171.

¹⁸⁵ Peter Georg Picht, ‘Schiedsverfahren in SEP/FRAND-Streitigkeiten’ [2019] GRUR 11, 13.

¹⁸⁶ See, for instance, Regional Court (Landgericht) Munich, 25 February 2021, 7 O 14276/20.

judges seem to perceive patent injunction decisions as the appropriate forum to address them. And indeed, the political process and competition law (enforcers) seem – at least in the context of German traditions and legal structures – more apt to deal with matters of industrial policy and the acquisition or abuse of dominance, respectively. Upon closer inspection, the situation is not dissimilar in the U.S. While courts applying the *eBay* factors do consider the public interest in their decision whether or not to grant injunctions, the public interest in this context has generally not expanded to encompass industrial policy considerations or market effects. This differs from the administrative U.S. ITC, which is mandated by statute to consider effects on the U.S. economy and markets in its public interest determinations. Likewise, politically motivated enforcement agencies in the U.S. have sought periodically to influence broader market conditions through policy advocacy and intervention in cases.¹⁸⁷ The two-pronged U.S. enforcement structure, with its prominent role for the ITC and its mandate, appears thus to be a major reason for the two jurisdictions' differing approaches to these factors. In Germany, without a clear mandate from Parliament to the contrary, the proportionality assessment made by courts under Sec. 139(1)(3) GPA should not include them. Of course, this does not mean that there can be no discourse on whether current patent law rules, as German courts must apply them, should open up more to industrial policy or general competition considerations.

IV. Comparative conclusions

Having explained our views on pertinent U.S. case law, on parallel applicability of the FRAND and proportionality defense, on the right way to calculate the compensation under Sec. 139(1)(4) GPA and on appropriate proportionality parameters in FRAND cases, we conclude with a few additional comparative takeaways.

For one thing, proportionality notions currently play a much stronger role in U.S. case law than in German case law. This appears to be one reason why an injunction in FRAND cases is harder to get from a U.S. judge, or even the ITC. As said before, a proportionality defense in German FRAND cases will probably have a low percentage of success even after the introduction of Sec. 139(1)(3) GPA.

A broad concept of relevant interests of third parties and, in particular, the general public, could almost be said

to be front and center in the U.S. proportionality assessment, whereas it was disputed in the German legislative process whether Sec. 139(1)(3) GPA should admit the consideration of third-party interests at all. Even though the provision now includes them, the third-party focus remains rather narrow. If courts continue to require a previous compulsory license request for defenses relying on third-party interests in the sense of Sec. 24(1) GPA, the gap between the U.S. and Germany would further widen in this respect.

More generally speaking, the scope of the U.S. proportionality balancing seems somewhat broader,¹⁸⁸ for instance with respect to industrial policy and general competition issues. This likely results, *inter alia*, from the fact that not only patent courts but also government agencies scrutinize the proportionality of patent injunctions in the U.S. The ITC seems much more ready to consider notions such as industrial policy, the competitive situation in general and a broad concept of relevant public interests. In a way, this can turn the proportionality assessment under U.S. law into a more political exercise than the parallel assessment under German law. On the other hand, party conduct – such as an infringer's negligence regarding FTO analysis or delayed enforcement by a patentee – tends to loom larger in the German analysis.

Finally, future case law in both jurisdictions will likely have to address the impact of IoT market characteristics and pending global license determinations on its injunction proportionality assessment. Adjusting a proportionality-based injunction defense to these, and possibly further ongoing developments, is an important condition for creating and maintaining the ability of such a defense to play a helpful role where negotiations and – for Germany and the EU – the *Huawei/ZTE* FRAND mechanism failed to reach a balanced solution. Importantly, it will also increase the instructive value of U.S. and German case law for proportionality assessments by the Unified Patent Court (UPC), in particular under Art. 62 UPC Agreement.¹⁸⁹

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¹⁸⁸ As an exception, U.S. decisions seem, so far, to have dwelled somewhat less on the relevance of undue patentee conduct. This may, however, be due more to the facts of the cases courts happened to adjudicate than to theoretical divergencies.

¹⁸⁹ art 62 (2) UPCA reads: '[t]he Court shall have the discretion to weigh up the interests of the parties and in particular to take into account the potential harm for either of the parties resulting from the granting or the refusal of the injunction'. See Contreras and Husovec (n 62) 339 (discussing potential effect of UPC on proportionality analysis for patent injunctions).

¹⁸⁷ See, eg, Jorge L. Contreras, 'Rationalizing U.S. Standardization Policy: A Proposal for Institutional Reform' (2021) 35 *Antitrust* 41.