

CHAPTER 4: INJUNCTIVE RELIEF

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Forthcoming in PATENT REMEDIES AND COMPLEX PRODUCTS: TOWARD A GLOBAL CONSENSUS*
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Abstract: Patent systems commonly empower courts to order accused or adjudged infringers to refrain from continuing infringing conduct in the future. Some patentees file suit for the primary purpose of obtaining and enforcing an injunction against infringement by a competitor, and even in cases in which the patentee is willing to license an invention to an accused infringer for an agreed price, the indirect monetary value of an injunction against future infringement can dwarf

the amount a finder of fact is likely to award as compensation for past infringement. In some of these cases, an injunction, if granted, would impose costs on accused infringers or third parties that go well beyond the more intrinsic value of the patented technology. This chapter explores the theory behind injunctive relief in patent cases, surveys the availability of this remedy in major patent systems, and suggests a general framework for courts to use when deciding whether injunctive relief is appropriate in individual cases.

I. Introduction

Patent systems commonly empower courts to order accused or adjudged infringers to refrain from continuing infringing conduct in the future. Some patentees file suit for the primary purpose of obtaining and enforcing an injunction against infringement by a competitor, and even in cases in which the patentee is willing to license an invention to an accused infringer for an agreed price, the indirect monetary value of an injunction against future infringement can dwarf the amount a finder of fact is likely to award as compensation for past infringement. In some of these cases, an injunction, if granted, would impose costs on accused infringers or third parties that go well beyond the more intrinsic value of the patented technology. In this chapter, we explore the theory behind injunctive relief in patent cases, survey the availability of this remedy in major patent systems, and suggest a general framework for courts to use when deciding whether injunctive relief is appropriate in individual cases.

II. Theory

As a matter of general theory, there are two frequently invoked rationales for issuing

injunctions against patent infringement: first, formal or moral arguments that such relief follows from—or is necessary to vindicate—the property-like nature of patent rights, and second, economic arguments that, relative to purely monetary relief, injunctions better advance social welfare in circumstances commonly characteristic of patent cases. Neither theory is absolute, however, and it is generally accepted that both suggest that injunctive relief should be limited or denied in a number of circumstances.

A. Nature of Patent Rights and Injunctions

To many, the nature of patent rights as “rights to exclude” is determinative of a strong, if not overwhelming, presumption in favor of injunctive relief, particularly when a final determination of infringement has been made.¹ The language and structure of international agreements, for example, is sometimes invoked in support of arguments that the nature of patent rights justifies a robust presumption in favor of injunctive relief.² The TRIPS agreement, to which the over 150 members of the WTO are subject, provides that members must give a patent owner rights “to prevent third parties not having the owner’s consent from” acts such as using the invention, subject only to “limited exceptions” or the satisfaction of specific requirements for

¹ Balganesch 2008, 638 (“[I]t remains common in modern times to equate the right to exclude with an entitlement to exclusionary or injunctive relief.”). In contrast, in rejecting any simple “general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances,” *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.391) (U.S.), the Supreme Court of the United States made clear its view that “the creation of a right is distinct from the provision of remedies for violations of that right,” *id.* at 392.

² Keyhani 2008, 11-12; cf. Mace 2009, 264 (discussing different potential interpretations of TRIPS).

situations “[w]here the law of a Member allows for other use of the subject matter of a patent without the authorization of the right holder.”³

Some also justify a strong presumption in favor of injunctive relief by analogy to remedies for violation of rights in tangible property, whether real or personal.⁴ One factor contributing to liberal use of injunctive relief to remedy real property harms is a general assumption that each parcel of real property is unique—not just in an objective sense, but also often for subjective personal reasons unique to its owner—and thus not readily replaceable via the market for real estate.⁵ A similar argument can be made with respect to patent rights. Because each patent claim is uniquely associated with a novel invention, as well as one or more inventors who may feel strongly invested in the novel idea they introduced to the world, monetary remedies can be difficult to calibrate properly⁶ and cannot return a patent holder to its rightful position by enabling the

³ TRIPS Agreement, arts. 28(1), 30, 31.

⁴ Epstein 2010, 456.

⁵ *See, e.g.*, Restatement (Second) of Torts § 946(b) cmt. b (“The relative adequacy of injunction . . . must be considered with reference to the question whether the plaintiff’s need for the particular chattel in question would be satisfied by the substitute which could be purchased in the market . . . This test is not limited to ascertaining that the chattel is unique. The term ‘unique chattel’ connotes an absolute irreplaceability, such as would be true of a painting by Rembrandt, or a family heirloom valued for its associations. Obviously, the damage remedy is futile in such cases.”).

⁶ Merges 1994, 2664 (“Because each asset covered by an [intellectual property right] is in some sense unique . . . it is difficult for a court in an infringement case to properly value the right-holder’s loss.”).

patent holder to purchase an essentially perfect substitute for what the infringer has taken.⁷

Still others justify such a presumption through a mixture of formal and pragmatic concerns that points to practical difficulties in “protecting a right to exclude through monetary remedies that allow an infringer to use an invention against the patentee’s wishes.”⁸ According to this view, the availability of injunctions to protect property-like “rights to exclude” might, as a practical matter, be critical to secure the benefit of such rights following a trespass or infringement. An injunction backed by potentially punitive sanctions for contempt might be presumed to have a greater deterrent effect on future infringement than would result from a mere repeat of compensatory monetary sanctions for past infringement.⁹ At least in jurisdictions which do not permit an award of ongoing royalties, this added deterrence can help spare a rightsholder from the need to sue the same infringer again to obtain compensation for substantially the same form of infringement, and thus reduces the risk that uncompensated costs associated with repeat litigation will lead the rightsholder to eventually cease defending its rights altogether. It similarly prevents repeat damages awards or ongoing royalties, even fully compensatory ones, from serving as informal compulsory licenses, which are (formally) constrained by international accords, such as TRIPS.¹⁰ Indeed, these arguments may be even stronger in the context of patent rights than property rights because patents protect publicly disclosed information (i.e., the enabling information disclosed in

⁷ See Oppenheimer 2015, 262 n.33.

⁸ Cf. *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.395) (U.S.) (Roberts, C.J., concurring) (emphasis omitted).

⁹ See, e.g., Golden 2012, 1414-15.

¹⁰ See, e.g., Keyhani 2008, 11-12.

a patent), which the rightsholder has little ability to defend by means of self-help.¹¹ That is, having disclosed the patented invention to the public in exchange for state-backed rights to exclude, a patentee has substantially surrendered a capacity to “fence in” that information in the manner of a real property owner building a fence to help prevent future trespass.

That said, even those advocating for strong property-like protection of patent rights commonly concede that the property-like nature of patent rights does not mandate injunctive relief in all situations.¹² Indeed, TRIPS itself makes clear that “Members may limit the remedies available against [infringing] use to payment of remuneration,”¹³ a provision that some commentators argue gives member nations broad discretion to limit injunctions.¹⁴ In addition, even in the context of trespass to real property rights, common law countries have historically subjected injunctive relief to exceptions that consider whether awarding such relief inflict a burden on the trespasser or public that is disproportionate to the harm that the trespass has inflicted upon the property owner.¹⁵ A quintessential example is found in the legal treatment of encroaching structures. Despite the nature of the underlying property right at stake, courts will generally refuse

¹¹ See, e.g., Gergen et al. 2012, 236.

¹² See, e.g., Epstein 2010, 489-90.

¹³ *Id.* at art. 44(2).

¹⁴ See, e.g., Cotropia 2008, 580; see also Kapczynski 2009, 1608 n.223 (summarizing the debate).

¹⁵ See, e.g., Balganesh 2008, 646 (contending that “[c]ourts never abdicated their discretion [to deny injunctions against trespass], but merely came to limit it to exceptional circumstances”); Epstein 2010, 494 (“[T]he boundary conditions on land have themselves never been treated as absolute and inviolate either.”).

to order the demolition of buildings that were inadvertently built so that they extend slightly over the boundary with a neighboring property.¹⁶ As courts have recognized, awarding such an injunction would allow the neighboring property owner to leverage the building's entire value to extract a settlement from the building's owner that is disproportionately large relative to the neighbor's actual harm from losing a sliver of land.¹⁷

Similar concerns arise as well in the context of patent infringement when an injunction might allow a patent holder to prevent, or at least to substantially tax, the use of much more than the patented technology itself. This can happen if, for example, an infringer must undergo high "switching costs" (e.g., from re-tooling or closing a factory) in order to terminate an ongoing course of infringement.¹⁸ Awarding an injunction in such a circumstance can allow the patent holder to negotiate a settlement derived in part on the value of technology located outside the scope of his claims, extending the effective reach of patent rights potentially far beyond the scope of the inventor's contribution to society. Even for those who believe that injunctions should generally issue against patent infringement, such extension of patents' effective reach can outrun rights-

¹⁶ See, e.g., Fennell 2006, 1042 n.21 ("Although the specifics vary from jurisdiction to jurisdiction, and exceptions can be found, most modern American courts will deny injunctive relief in good faith encroachment situations where the injunction would impose a disproportionately heavy burden on the encroacher."); see also the discussion below Part III.C. noting that in the UK the most common type of property case in which an injunction is refused are those where the plaintiff has sought a mandatory injunction to pull down a building which infringes his right to light or which has been built in breach of a restrictive covenant.

¹⁷ See *Isenberg v. East India House Estate Co. Ltd.* (Ct Ch 1863) (UK) (before Lord Westbury LC); see also *Jaggard v. Sawyer* (Civ 1995) (UK), both discussed in Part III.C. below.

¹⁸ See, e.g., Cotter et al. 2018; Heald 2008, 1183-87.

based rationales for injunctive relief and lead to concessions that court practices in issuing injunctions should be qualified or tailored accordingly.¹⁹

B. Economic Analysis and Complex Products

Economic arguments for or against injunctions often draw on more general debates about the relative economic efficiency of protecting legal entitlements through “property rules” associated with grants of injunctive relief or “liability rules” associated with awards of compensatory damages.²⁰ As suggested by discussion above of how rationales for injunctions can mix formal and pragmatic perspectives, these economic arguments can overlap with arguments that might at least initially be viewed as more fundamentally tied to the nature of patent rights. Sometimes the difference between more purely economic and more fundamentally rights-based arguments can appear to revolve principally around the extent to which an argument looks to vindication of underlying purposes of patent law, as opposed to vindication of patent rights that are assumed generally to serve those underlying purposes. Sometimes the difference can seem to reflect to a large degree the level of generality at which argument is conducted—for example, whether one primarily looks to achieve “right” outcomes in individual cases or on-average “right” outcomes in great masses of cases.

For purposes here, a more fundamentally economic approach is taken to be one that is concerned less with protecting rights to exclude as such and more with ensuring that rights are

¹⁹ See, e.g., Epstein 2010, 493-94.

²⁰ Calabresi & Melamed 1972, 1092. Cotter 2013a, 53; Cotter & Golden 2018.

valued as accurately as possible. Proper judicial remedies for patent infringement can help secure this end by helping set properly calibrated expected values for rights that can then stimulate innovative activity in line with social goals. To this end, the primary benefit of “property rules” associated with a strong presumption of injunctive relief arises not from bare enforcement of the “right to exclude,” but rather from the fact that such a rule effectively demands that “someone who wishes to remove the entitlement from its holder ... buy it from [the holder] in a voluntary transaction” at a price to which the holder agrees.²¹ In contrast, a “liability rule,” generally associated with no more than compensatory damages, can effectively enable (litigation costs aside) a party to “destroy the initial entitlement” in exchange for payment of “an objectively determined value” to which the entitlement holder need not agree.²²

Typical economic analysis suggests that property rules—and, hence, the presumptive issuance of injunctive relief—is socially desirable when the obstacles to voluntary transactions “are relatively low compared to the information and error costs associated with government determinations of proper amounts” of damages under a liability rule.²³ As indicated above, it is generally accepted that the relative uniqueness of individual patent rights, combined with the lack of a thick public market for patent rights to which potential damages awards could be compared,²⁴

²¹ Calabresi & Melamed 1972, 1092.

²² *Id.*

²³ Cotter & Golden 2018.

²⁴ See, e.g., Lemley & Myhrvold 2007, 257-59 (describing problems created by the “blind market” for patents and proposing mandatory publication of patent license and sale terms as a solution); Kelley 2011, 116-17 (“[B]oth scholars and practitioners are seeking ways to improve how patents are valued, with scholars often calling for greater disclosure

makes it difficult for courts and jurors to assign a value to patent infringement. In addition, the public nature of the patent document and patents' restriction to new technologies provide (at least in theory) some reason to hope that a private party looking to use a patented technology will be able to identify the relevant patent holder and to contract to use the technology in advance of any infringement. With these considerations in mind, some scholars have concluded that conventional economic analysis suggests that patent rights are good candidates for property-rule enforcement.²⁵ Proponents of such treatment often also argue that injunction-enforced exclusivity will spur patent holders to improve and exploit the patented technology, as well as allow them to coordinate follow-on development in a way that limits wastefully duplicative downstream activities.²⁶

Other scholars have called these contentions into question, however, particularly in light of the complexity of modern technology and the realities of the current patent landscape.²⁷ Today, new products often incorporate a multitude of technologies, and when a relevant individual patent is likely to cover just one of these myriad technologies, achieving clearance of patent rights through voluntary transactions becomes problematic. For one, identifying all the patents that a new complex product might infringe can become a particularly difficult and expensive task—one that in many circumstances may not be possible at a cost that makes sense from a social welfare

of sale terms to aid in setting market prices and practitioners focusing on refining methods for predicting a patent's value to their own clients.”).

²⁵ See, e.g., Merges 1994; Schoenhard 2008.

²⁶ See Kitch 1977, 266.

²⁷ See Lemley & Weiser 2007, 797-98.

standpoint.²⁸ In addition, the difficulty of determining the portion of the value of a complex product that should be attributed to a single patented technology can make it hard for private parties to agree on an appropriate license value, even if they are bargaining in good faith to agree on such a value (though by the same token, it makes it difficult for a court to accurately assess a reasonable royalty).

The concepts of “holdup” and “holdout” offer another, related lens through which to view economic debates about the propriety of injunctions. Parties on both sides of a patent transaction face strong temptations for strategic reasons to insist on payment of an amount that is higher or lower than a good-faith estimate of patented technology’s true value.²⁹ One such temptation is for a patent owner to leverage the availability of injunctive relief to extract “holdup” value from potential licensees that have already incorporated the patented technology in a larger, complex product. By threatening to seek an injunction to shut down production and sale of the licensee’s entire product, a patent holder can effectively place at risk not just the value that the licensee derives from the patented technology, but also the value of all the other technologies bundled into the product. In other circumstances, a potential licensee might be tempted to adopt a “holdout” strategy by refusing to strike a deal either at all or at anything but an unreasonably low licensing

²⁸ See Mulligan & Lee 2012, 289, 304 (estimating that “[i]n software, for example, patent clearance by all firms would require many times more hours of legal research than all patent lawyers in the United States can bill in a year” because “there are around twenty-four billion new [software] patent-firm pairs each year that could produce accidental infringement”). See generally Sterk 2008, 1304 (concluding that, “compared with a liability-rule regime, a property-rule regime creates excessive incentives to search even when search costs are high, the probability of encroachment is relatively low, and the likely harm to the property owner is low”).

²⁹ See Chapter 7.

rate, not just to delay eventual payment but perhaps in hopes of establishing a reputation as a tough negotiator or of leveraging the costs and risks of litigation against a smaller, less sophisticated patent holder.

Consequently, determining when injunctions should be available can at least in part be viewed as an exercise of efficiently weighing the risk that they will enable “holdup” against the prospect that they will deter “holdout.” Substantially because an injunction could deprive a potential infringer of more than the portion of the value of a patented technology that corresponds to a “reasonable royalty” or a patentee’s lost profits, the threat of injunctive relief can act as a strong deterrent to holdout. If an injunction is unavailable and patent damages simply require an infringer to pay an amount essentially equivalent to what an advance license would cost, a potential user of a patented technology might well be tempted to hold out and refuse to pay for such a license in advance.³⁰ The possibility that the patent holder will not detect infringement or will ultimately decline to undergo the costs of enforcement might make holding out an economically sound strategy. Injunctions can check the temptation to engage in such a strategy. But as is commonly a risk with deterrence, there is danger that the deterrence from threatened injunctive relief will overreach, particularly where the complexity of a product or process has the dual effects of (1) making advance patent clearance difficult to achieve and (2) making a patent’s potential holdup value much greater than the properly apportioned value of the patented technology. Hence, especially with respect to complex products, there can be a significant danger that the holdup potential of injunctive relief will chill investment in innovation to a socially undesirable degree.

As a result, from an economic perspective, there is good reason to believe that neither a

³⁰ We discuss this topic further in Chapter 3.

pure property rule nor a pure liability rule is an ideal fit for patent infringement. As discussed in greater detail below in Part IV, one way to help thread the needle—that is, to substantially retain the relative advantages of injunctive relief while limiting the likelihood of injunctive “over-reach” that places a greater burden on innovative activities than is socially desirable—is to make decisions on the issuance and tailoring of injunctions with particular attention to concerns about proportionality. Among those who favor greater emphasis on liability rules for patent infringement, the potentially disproportionate nature of injunctive relief, particularly when complex products are involved, is one of the main concerns with a property-rule approach.³¹ Even scholars who are among the strongest proponents of property rules tend to acknowledge that it can make little economic sense to issue an injunction that provides a basis for “economic extortion” by placing at the patentee’s mercy the continued viability of a “complex product [that] has thousands of different components of which only one is covered by the plaintiff’s patent.”³² Likewise, there is common concern about the risk of socially excessive holdout by potential infringers, with a threat of injunctive relief being one of the means by which such parties can be encouraged to clear others’ rights *ex ante*, rather than *ex post*.³³ Hence, for a broad range both of theorists and of theories, there seems at least a baseline common ground: courts or other enforcers of patent rights should have some power to issue injunctions or other, potentially supra-compensatory remedies, but economic analysis argues against injunctive relief in at least some

³¹ *See, e.g.*, Lemley & Weiser 2007, 793-96.

³² *See, e.g.*, Epstein 2010, 490.

³³ *See, e.g.*, Heald 2008, 1175 (“An efficient system of remedies would provide all parties with incentives to negotiate when that is the optimal strategy from the standpoint of social welfare.”).

situations where that relief will have effects disproportionate to the underlying rights at issue.

As Parts II and III will make clear, there are a variety of ways by which courts might try to alleviate such disproportionality, including not only denying injunctive relief altogether but also by delaying or otherwise tailoring injunctive relief to make it less burdensome. For purposes here, however, the key point is that, from a variety of theoretical viewpoints, engaging in such alleviation is something that can make good sense, whether the concern is respecting property rights, achieving fairness, or advancing overall social welfare.

C. Preliminary v. Permanent Injunctions

The above analysis focuses on the question of whether and to what extent injunctive relief is appropriate as a general matter, albeit at least sometimes with a background presumption that a patent has been adjudged to have been infringed. Further theoretical wrinkles come from considering the question of *when* in the context of patent infringement litigation such relief should go into effect. While “permanent” injunctions are almost universally available as a remedy for patent infringement, many patent systems also permit courts to award “preliminary” injunctive relief while a patent suit is pending.³⁴

A preliminary injunction can play an important role in preventing irreparable harm to a patent holder’s market position during the months or years that elapse before a case is litigated to a final judgment. But preliminary injunctions are generally harder to justify on practical and

³⁴ It is also common in some jurisdictions, most notably Germany and China, for injunctions to issue after a finding of infringement, but before the asserted patent’s validity has been adjudicated in a separate administrative action. *See* Cremers et al. 2016; Love et al. 2016.

theoretical grounds than their permanent counterparts. For one, at the time of a preliminary injunction an accused infringer is still only accused: there has not yet been a final judgment of actual infringement on the merits.³⁵ Because it has not yet been determined that the activity to be enjoined falls within the scope of a valid patent right, the case for a preliminary injunction based on nature-of-the-right analysis is generally diluted. Moreover, under an economic analysis, the risks of inflicting a disproportionate burden on an accused infringer and of providing a disproportionate reward to a patent holder are also inflated by the possibility that the patent holder will not necessarily win on the merits. As Hoffmann J has said:

The principal dilemma about the grant of interlocutory injunctions, whether prohibitory or mandatory, is that there is by definition a risk that the court may make the ‘wrong’ decision, in the sense of granting an injunction to a party who fails to establish his right at the trial (or would fail if there was a trial) or alternatively, in failing to grant an injunction to a party who succeeds (or would succeed) at trial. A fundamental principle is therefore that the court should take whichever course appears to carry the lower risk of injustice if it should turn out to have been ‘wrong’ in the sense I have described.³⁶

³⁵ Laycock 2002, 445.

³⁶ *Films Rover Int’l Ltd. v. Cannon Film Sales Ltd.* (Ch 1986, p.780-81) (UK). This is similar to the principle of minimization of irreparable harm advocated in Leubsdorf 1978 and restated by Judge Posner in *Am. Hosp. Supply Corp. v. Hosp. Prods. Ltd.* (7th Cir. 1986, p.598) (U.S.). The difference is that the Leubsdorf-Posner approach draws a difficult distinction between irreparable and reparable harms which Hoffmann J’s formulation avoids: *see generally* Laycock 1991, 118-123. Laycock ultimately endorses a rule that is essentially the same as Hoffmann J’s lower risk principle: *see* Laycock’s “restatement,” *id.* at 273. *See also* Lichtman 2003 (arguing that the optimal decision rule may

More formally, we can say that the court should focus on comparing the expected harm to each of the parties. The expected harm to the patentee can be expressed as $P \times H_P$ where P is the probability that the plaintiff will prevail on the merits and H_P is the harm that the patent holder is expected to suffer if the injunction is denied. Similarly, the expected harm to the defendant is $(1 - P) \times H_D$, where H_D is the harm the defendant is expected to suffer if the injunction is granted. If the expected harm to the patentee is greater than the expected harm to the infringer, the injunction should be granted; otherwise it should be refused.

One way to ensure that a preliminary injunction is not granted unless the risk of injustice is low, is to make the patent holder's likelihood of success on the merits a significant factor in the decision whether to issue a preliminary injunction.³⁷ If a patent holder is very likely to prevail in a patent infringement suit, the patent holder will have a greater likelihood of being able to obtain a preliminary injunction against allegedly infringing activity. In terms of the above formula, this approach focuses on ensuring the "P" is as high as possible. The difficulty with this approach is that if courts are required to make a preliminary conclusion on the merits, it may require parties to conduct, and courts to preside over, what amounts to a "mini-trial" that may well involve extensive discovery and a multi-day evidentiary hearing covering topics that will be re-hashed again in more detail if the case proceeds to trial. For that reason, this approach was abandoned in England forty

be more complex than the Posner formula, once one takes into account the variance of courts' predictions concerning the magnitude of the harms each party faces).

³⁷ See Dobbs 1993, 253 § 2.11(2); this was also true in UK law prior to the American Cyanamid decision in 1979, *Am. Cyanamid Co. v. Ethicon Ltd.* (Ch 1979) (UK).

years ago in favor of holding that the only question regarding the merits is whether the plaintiff has raised “a serious question to be tried,” so that the grant of a preliminary injunction will turn largely on the balance of hardships.³⁸ Notably, the U.S. Court of Appeals for the Federal Circuit has taken effectively the opposite approach in patent cases; preliminary injunctions may be denied solely based on the *defendant* raising a *substantial* question regarding validity or infringement, a standard some judges have criticized as requiring denial if the defendant raises any defense “worthy of consideration.”³⁹

An alternative approach to addressing disproportionality is to require the plaintiff to agree *ex ante* to compensate the defendant, either partially or fully, should the plaintiff fail to win the case on the merits. In the U.S., plaintiffs are generally required as a condition for obtaining a preliminary injunction to post a bond that may be used to compensate the defendant if it is later found to have been wrongfully enjoined.⁴⁰ However, the defendant may recover no more than the

³⁸ See *Am. Cyanamid Co. v. Ethicon Ltd.* (HL 1975) (UK); *All. for the Wild Rockies v. Cottrell* (9th Cir. 2011, p.1134-35) (U.S.) (“A preliminary injunction is appropriate when a plaintiff demonstrates . . . that serious questions going to the merits were raised and the balance of hardships tips sharply in the plaintiff’s favor.” (quoting *Lands Council v. McNair* (9th Cir. 2008, p.987) (U.S.) (en banc))).

³⁹ *Kimberly-Clark Worldwide, Inc. v. First Quality Baby Prod., LLC* (Fed. Cir. 2011, p.1298) (U.S.) (Newman, J., dissenting from denial of en banc rehearing) (“No other circuit denies a preliminary injunction merely because the nonmovant has raised an argument worthy of consideration.”).

⁴⁰ See Fed. R. Civ. P. 65(c) (“The court may issue a preliminary injunction or a temporary restraining order only if the movant gives security in an amount that the court considers proper to pay the costs and damages sustained by any party found to have been wrongfully enjoined or restrained.”).

bond amount, which may result in undercompensation.⁴¹ In many other countries, including at least the UK, Canada, France, Germany, and Spain, courts normally require a plaintiff to agree ex ante to fully compensate the defendant ex post should the plaintiff fail to win the case on the merits.⁴² Whether full or partial compensation is required, this approach focuses on reducing H_D , because the harm to the defendant if the injunction is “wrongly” granted is only the difference between its true loss and the amount of the compensation. The patentee’s expected loss, H_P , is similarly minimized by the prospect of an award of damages if the injunction is refused and the patentee prevails. A court in a jurisdiction which requires full compensation to the defendant if the injunction is wrongly granted should be more willing to grant a preliminary injunctions than a court in a jurisdiction which requires only partial indemnification.

A combination of these approaches—requiring compensation to the defendant as a condition of granting the preliminary injunction, while at the same time undertaking a modest examination of the merits—is also possible and arguably desirable. Appropriate case management may allow the merits to play a more substantive role in some cases while still avoiding the problem of mini-trials.

An additional concern with preliminary injunctions is that their issuance early in infringement proceedings can, absent appropriate safeguards, sometimes impose an especially high burden on accused infringers. Once accused of patent infringement, a technology user will often explore ways of “designing around” the patent or otherwise avoiding use of potentially infringing technology in future products or processes. The grant of a preliminary injunction early

⁴¹ See Grosskopf & Medina 2009, 907-09.

⁴² See Heath 2008; Montañá 2013; Véron 2012; Dobbs 1993, 263 § 2.11(3).

in the litigation process may make it expensive and disruptive for the accused infringer to shift to a less legally vulnerable position. If the accused infringer has to entirely suspend production and sale of a complex product during a period of redesign in order to comply with a preliminary injunction, this may allow the patentee to hold up the accused infringer, in the same matter as the grant of a permanent injunction. Refusing a preliminary injunction entirely mitigates the potential for this type of holdup, but may not adequately protect the interests of the patentee. An intermediate approach is to grant the preliminary injunction, subject to a stay. As with permanent injunctions, staying a preliminary injunction to allow more time for such switching can mitigate the possibility of disproportionate hardship to an accused infringer. But of course, a court needs to weigh this potential benefit of delay against the harm that a patent holder is expected to suffer in the meantime.

III. Comparative Overview of Injunction Practices

A. Overview

A permanent injunction is an available form of relief in all patent law systems.⁴³ In all major legal systems injunctions have traditionally been available almost automatically in case of patent infringement, so long as there is some real threat of future infringement. This tradition has

⁴³Indeed, the TRIPS Agreement provides that a permanent injunction must be an available remedy: *see* TRIPS Agreement, art. 44(1).

come under pressure recently, with the confluence of several factors, including the rise of patent assertion entities (PAEs), litigation over standard essential patents subject to FRAND commitments, and the general rise in litigation involving complex products, where an injunction to prevent infringement by a minor feature may keep the entire product off the market.

For comparative purposes, the various legal systems can be divided into three broad categories: the United States, other common law countries, and civil law countries. In most civil law countries, such as Germany, a successful patentee is considered to be entitled to an injunction as a matter of right.⁴⁴ The ability to obtain injunctive relief may be restrained, however, through various types of generally applied defenses, such as abuse of rights or lack of good faith, as well as by competition law. In countries with a common law tradition, such as England and the U.S., injunctive relief has long been recognized as being discretionary in principle, notwithstanding the traditional practice of granting injunctions almost automatically in patent cases. However, since the Supreme Court of the United States decision in *eBay*, practice in the common law countries has diverged. In most countries, including England, there remains a strong presumption in favor of granting injunctive relief. In contrast, in the U.S. since *eBay*, there is no longer a presumption in favor of injunctive relief.

One noteworthy aspect of the divergence between England and Germany, for example, is that (for the time being) both nations are subject to the EU Enforcement Directive,⁴⁵ which deals with civil remedies for violation of IP rights. It is directed to member states, which are left free to decide how they ensure that IP remedies are applied in a manner that complies with the rules

⁴⁴See Cotter 2013a, 245-46.

⁴⁵Directive 2004/48/EC.

prescribed by the directive. The general principles governing application of injunctions may be perfectly respected within a patent system that requires balancing patentees' and implementers' interests in each case, as is the case with systems where injunctive relief is rooted in equity. Equally, these principles may be respected in a patent system where injunctive relief may be denied by resorting to defenses placed "outside" of patent law, such as abuse of rights, breach of rules of good-faith, or antitrust / competition law.

Substantively, Article 3 provides that remedies "shall . . . be effective, proportionate and dissuasive," Article 11 requires that injunctive relief is an available remedy, and Article 12 provides that injunctive relief may be refused, and pecuniary compensation awarded instead, if the infringer "acted unintentionally and without negligence, if execution of the measures in question would cause him/her disproportionate harm and if pecuniary compensation to the injured party appears reasonably satisfactory." While Article 11 provides that member states must ensure that an injunction aimed at prohibiting the continuation of the infringement "may issue," Article 12 provides that courts "may" order pecuniary compensation in specified circumstances. This appears to contemplate that an injunction will normally issue except in those circumstances. To date, the EU Enforcement Directive does not appear to have had a significant impact on the jurisprudence of the member states with regard to injunctions, perhaps because each state considers that the principles are already embodied in national law (as is the view in England, discussed in more detail below), or because cases that require a deviation from traditional principles to conform with the Directive have not yet arisen. However, it is possible that this will change in the years to come, particularly in light of recent, additional Communications from the European Commission that

emphasize the Enforcement Directive’s principle of proportionality.⁴⁶

B. United States

1. eBay Principles

The U.S. Patent Act provides that an injunction may be granted as a remedy for patent infringement, “in accordance with the principles of equity.”⁴⁷ Prior to the decision of the Supreme Court of the United States in *eBay v. MercExchange*,⁴⁸ nearly all patentees who sought injunctive relief received a permanent injunction after prevailing on liability,⁴⁹ and the Federal Circuit in the decision on appeal had stated that “the general rule is that a permanent injunction will issue once

⁴⁶ European Commission, at 18, COM (2017) 708 final (stating, inter alia, that courts should ensure, on a case-by-case basis, that injunctions be consistent with the principle of proportionality; that injunctions “should have the minimal scope necessary to accomplish this objective”; and that it “is not necessary that the measures required by the injunction lead to a complete cessation of the IPR infringements”); European Commission, at 10, COM (2017) 712 final (similar).

⁴⁷ U.S. Patent Act, 35 U.S.C. § 283. There are some statutory exceptions, unrelated to complex products: *see, e.g., id.* at § 287(c). Patent owners may also obtain exclusion orders from the International Trade Commission. The relevant inquiry differs (*see Spansion, Inc. v. Int’l Trade Comm’n* (Fed. Cir. 2010, p.1359) (U.S.)), and is not considered in this overview.

⁴⁸ *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006) (U.S.).

⁴⁹*See id.* at 395 (Roberts, C.J., concurring) (“From at least the early 19th century, courts have granted injunctive relief upon a finding of infringement in the vast majority of patent cases.”).

infringement and validity have been adjudged.”⁵⁰ In *eBay*, the Supreme Court held that “a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief.”⁵¹ The Court described this test as being in accordance with “well-established principles of equity,” but some scholars have disputed whether the test set out in *eBay* is consistent with traditional equitable principles previously applied by U.S. courts.⁵² Whether it was a return to, or departure from, traditional principles, the *eBay* decision has had a major impact on the practice of injunctive relief, particularly in patent cases. Prior to *eBay* injunctions were granted to prevailing patentees in almost all cases, but since *eBay* motions for permanent injunctions have been granted approximately three quarters of the time.⁵³ This overview describes U.S. law post-*eBay*.

In *eBay* the Supreme Court rejected both a categorical rule in favor of permanent injunctions and a categorical denial of injunctions based on certain “expansive principles.”⁵⁴ The Court identified a four-factor test to guide courts’ exercise of their discretion to grant injunctions. Writing for the Court, Justice Thomas explained that the patent owner “must demonstrate” four factors:

⁵⁰*MercExchange, LLC c. eBay, Inc.* (Fed. Cir. 2005, p.1338) (U.S.).

⁵¹*eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.391) (U.S.).

⁵²*See* Gergen et al. 2012.

⁵³Seaman 2016, 1983 (reporting on the basis of an empirical study that since *eBay* “permanent injunctions were granted slightly less than three-quarters of the time (72.5%),” and noting this is consistent with previous empirical scholarship finding grant rates ranging between 72% and 75%).

⁵⁴ *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.393) (U.S.).

(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.⁵⁵

As interpreted by the Federal Circuit, all four parts of the test must be individually satisfied (i.e., proven like elements, rather than weighed as factors) for a permanent injunction to be granted,⁵⁶ and it is in any event clear that an injunction will not be granted unless the patentee can establish that it has suffered irreparable injury, regardless of the balance of hardships.⁵⁷

Justice Kennedy, joined by three other Justices, wrote a concurring opinion that has proven

⁵⁵ *Id.* at 391.

⁵⁶As interpreted by the Federal Circuit, *eBay* requires patentees to satisfy all four parts of the test in order to obtain an injunction. *Nichia Corp. v. Everlight Ams., Inc.* (Fed. Cir. 2017) (U.S.) (holding that an injunction should be denied unless all four factors are satisfied). Such a rule is inconsistent with traditional equitable practice, *see* Gergen et al. 2012, 207-08, and arguably also at odds with contemporaneous case law developed by at least some other U.S. Courts of Appeals, *see, e.g., Citigroup Glob. Mkts., Inc. v. VCG Special Opportunities Master Fund Ltd.* (2nd Cir. 2010, p.35) (U.S.) (holding that a party seeking a preliminary injunction must “show (a) irreparable harm and (b) either (1) likelihood of success on the merits or (2) sufficiently serious questions going to the merits to make them a fair ground for litigation and a balance of hardships tipping decidedly toward the party requesting the preliminary relief” (internal quotation marks omitted)).

⁵⁷ *See Winter v. Natural Resources Defense Council, Inc.* (U.S. 2008) (U.S.).

influential.⁵⁸ He highlighted three concerns he viewed as new: (1) firms using patents “not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees”; (2) situations where “the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations”; and (3) the “burgeoning number of patents over business methods.”⁵⁹

Indeed, as discussed in the sections below, lower courts applying the *eBay* test often appear to be influenced more by concerns similar to those expressed by Justice Kennedy than by the formal test enunciated by the Court. Accordingly, rather than orient the discussion that follows around the factors set out in *eBay* itself, we frame the discussion in terms of the factors empirically identified by Seaman (2016) as being the most important determinants of whether an injunction will be granted. Consequently, we pay little attention to factors such as the balance of hardship and the public interest, which, while prominent in the formal *eBay* test, play a relatively small role in practice in the context of complex products. The factors identified by Seaman do not correspond directly to the *eBay* factors, though they are all encompassed in the *eBay* test. For example, the status of the patentee, as a competitor or a non-practicing entity, is not expressly a factor under *eBay*, but is raised as part of the irreparable harm analysis.

⁵⁸See Seaman 2016, 1989.

⁵⁹ *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.396-97) (U.S.) (Kennedy, J., concurring).

2. Irreparable injury

a) General

Prior to *eBay*, courts applied a rarely-rebutted presumption that prevailing patentees would suffer irreparable harm in the absence of an injunction, but the Supreme Court overruled that presumption in *eBay*.⁶⁰ Under what we take to be the best view of the first *eBay* factor, a patent owner must demonstrate that it would suffer irreparable injury if an injunction were not granted.⁶¹ Confusingly, however, the Supreme Court stated that a patent owner must demonstrate “that it *has* suffered an irreparable injury.”⁶² The Federal Circuit has acknowledged that “by its terms the first *eBay* factor looks, in part, at what has already occurred” and accordingly held that a district court did not err in “consider[ing] evidence of past harm” in deciding whether to issue an injunction.⁶³

A recent study, Seaman (2016), has shown that loss of market share is by far the most common reason for a district court finding irreparable harm.⁶⁴ Other important reasons include

⁶⁰*Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2015, p.649) (U.S.) (*Apple IV*).

⁶¹ Literally, the Court stated that the patent owner must show that it “has” suffered an irreparable injury, but despite the use of the past tense, it was initially understood conditionally by a number of courts. *See* Gergen et al. 2012, 209-10.

⁶² *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.391) (U.S.) (emphasis added).

⁶³ *i4i Ltd. Partnership v. Microsoft Corp.* (Fed. Cir. 2010, p.861-62) (U.S.).

⁶⁴ Seaman 2016, 1993 (“[T]he most common reason by far for finding irreparable harm was loss of market share (80%).”).

price erosion, loss of goodwill or damage to a brand or reputation, and loss of future business opportunities.⁶⁵ A patentee that competes in the same market as the infringer more easily establishes these reasons for irreparable harm as compared to a patentee that does not compete with the infringer. The infringer's potential inability to pay money damages is the only one of the six most important reasons for finding irreparable harm that is not related to the competitive status of the parties, and it is the least common of the six.⁶⁶ Consequently, as discussed in more detail below, a patentee that competes with the infringer is much more likely to be granted an injunction than one that does not.

The second factor asks whether legal remedies are adequate compensation. Despite the Supreme Court identifying two separate factors, the first and second factors ask essentially the same question.⁶⁷

b) Causal nexus

An aspect of the irreparable harm requirement as interpreted by the Federal Circuit is that there must be a causal nexus between the infringement and the irreparable harm. It is not enough that the patentee would suffer irreparable harm if the sale and distribution of the infringing product

⁶⁵ *Id.* at 1992-93.

⁶⁶ *Id.* (finding that inability to pay is the basis for a finding of irreparable harm in only 5% of cases in which irreparable harm is established).

⁶⁷ Gergen et al. 2012, 207-08 (“[T]he test redundantly states requirements of irreparable injury and inadequacy of legal remedies.”); *see also* Seaman 2016, 1994 (revealing a very strong positive relationship between these first two factors).

were not enjoined; the patentee must suffer that harm because of the infringement. As the Federal Circuit explained in *Apple II*:

where the accused product includes many features of which only one (or a small minority) infringe—a finding that the patentee will be at risk of irreparable harm does not alone justify injunctive relief. Rather, the patentee must also establish that the harm is sufficiently related to the infringement.⁶⁸

As illustrated by this example, the causal nexus requirement is particularly relevant to patents covering complex products.⁶⁹

Some Federal Circuit decisions have used language suggesting that the patented technology must “drive demand” for the product,⁷⁰ which might largely preclude injunctive relief in complex product cases. However, in *Genband US LLC v. Metaswitch Networks Corp.* the Federal Circuit explained that at least in the context of a complex product, “in which only a component of a larger

⁶⁸ *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2012, p.1374) (U.S.) (*Apple II*); see also *id.* at 1373, 1374 (explaining that the causal nexus requirement is part of the irreparable harm factor).

⁶⁹In principle, “the causal nexus requirement applies regardless of the complexity of the products,” but “[i]t just may be more easily satisfied (indeed, perhaps even conceded) for relatively ‘simple’ products.” *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2013, p.1362) (U.S.) (*Apple III*).

⁷⁰See, e.g., *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2012, p.1324) (U.S.) (*Apple I*); *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2012, p.1375) (U.S.) (*Apple II*).

product or system is covered by the patent in suit,”⁷¹ it is not necessary for the infringing feature to be the sole driver of demand. When the patentee relies on lost sales to show irreparable harm, the causal nexus can be established by showing that the infringing features significantly increased the product’s desirability,⁷² or that they impact customers’ purchasing decisions.⁷³ On the other hand, “[i]f all but an insignificant number of purchases from the infringer would have been made even without the infringing feature, the causal connection to the asserted lost-sale-based injury is missing.”⁷⁴

3. Balance of hardships & public interest

The third part of the *eBay* test assesses the relative effect on the parties of granting or denying an injunction, while the fourth looks to the public interest.⁷⁵ In contrast with the requirement that the patentee establish irreparable harm, which is often the sole reason for denying injunctive relief, these factors rarely constitute the sole basis for denying injunctive relief, except in the case of medical devices.⁷⁶

⁷¹*Genband US LLC v. Metaswitch Networks Corp.* (Fed. Cir. 2017, p.1384) (U.S.).

⁷²*Id.*

⁷³*Id.* at 1383, quoting *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2015, p.642) (U.S.) (*Apple IV*).

⁷⁴*Genband US LLC v. Metaswitch Networks Corp.* (Fed. Cir. 2017, p.1384) (U.S.).

⁷⁵ *eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.392) (U.S.).

⁷⁶ *Seaman* 2016, 1991-92, 1995.

4. Status of the patentee

Some commentators have suggested that injunctions should be more readily granted to patentees who would have been unwilling to license to the infringer, because the patentee is seeking to enforce market exclusivity, either for itself as a competitor in the market with the infringer, or for a handful of exclusive licensees,⁷⁷ and some district courts have relied upon the willing/unwilling licensor distinction to deny injunctive relief to patent owners deemed to be willing licensors.⁷⁸ In *eBay*, the Supreme Court rejected the proposition that a plaintiff's willingness to license its patents and its lack of commercial activity in practicing the patents would be sufficient to establish that the patent holder would not suffer irreparable harm if an injunction did not issue, but the Court gave as counter-examples patent holders such as university researchers or self-made inventors who might prefer to license rather than bring their works to market themselves.⁷⁹ As noted above, in his concurrence, Justice Kennedy suggested that injunctions should be more readily refused to firms using patents "not as a basis for producing and selling

⁷⁷Lee & Melamed 2016, 445; Lemley & Shapiro 2007a, 2036.

⁷⁸See, e.g., *Telcordia Tech., Inc. v. Cisco Sys., Inc.* (D. Del. 2009, p.748 n.10) (U.S.) (noting the patent owner's "willingness to license its patents also suggests that its injury is compensable in monetary damages, which is inconsistent with the right to exclude"); *Sundance, Inc. v. DeMonte Fabricating Ltd.* (E.D. Mich. 2007, p.2) (U.S.) (stating that "licens[ing] the [infringed patent] to others, and offer[ing] to license it to [the infringer] prior to filing suit . . . demonstrat[e] that money damages are adequate").

⁷⁹*eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.393) (U.S.).

goods but, instead, primarily for obtaining licensing fees,” which is to say, patent assertion entities, as distinct from other types of non-practicing entities mentioned in the Court’s opinion. Moreover, while the Federal Circuit has held that it is not error for a district court to consider evidence of past licensing behavior, the evidence must be considered in the context of all of the evidence.⁸⁰ In particular, a district court errs, according to the Federal Circuit, when it finds that monetary damages will be adequate to compensate the patent owner based on the mere fact that the patent owner “is willing to license the asserted . . . patents in some circumstances,” and even if there also is evidence that the patent owner “is willing to license some patents to [the infringer].”⁸¹

In terms of the district court practice since *eBay*, *Seaman* (2016) has shown that a patent owner’s willingness to license the asserted patent has not, as such, proven to be a statistically significant circumstance pointing toward the denial of injunctive relief.⁸² However, *Seaman* (2016) defines willingness to license very broadly, to include any case in which there was evidence that the patentee was willing to license to any other party in at least one instance, even if the patentee did not have a general practice of licensing. *Seaman* (2016) also found that the presence of competition between the patent owner and the infringer has proven to be the single most significant circumstance corresponding to the provision of injunctive relief: “Patent holders who competed

⁸⁰*Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2013, p.1370) (U.S.) (*Apple III*).

⁸¹*Id.*

⁸²*Seaman* 2016, 198-99 (“[S]everal other factors identified in the existing literature as relevant to the injunction calculus appear not to be statistically significant and/or do not have the anticipated impact. For instance, a patentee’s willingness to license the patent(s)-in-suit is actually positively correlated with injunctive relief after controlling for all other factors, although this finding is not statistically significant.”) (footnotes omitted).

with an infringer were granted a permanent injunction in the overwhelming majority of cases (84%; 150 of 179 cases), while patentees who were not market competitors rarely succeeded in obtaining injunctive relief (21%; 8 of 39 cases).⁸³ PAEs in particular rarely obtain injunctive relief.⁸⁴ In fact, some commentators have gone so far as to suggest that “district courts appear to have adopted a de facto rule against injunctive relief for [patent assertion entities] and other patent owners who do not directly compete in a product market against an infringer.”⁸⁵ The doctrinal mechanism turns primarily on the irreparable harm requirement; as noted above, the factors that most commonly establish irreparable harm are associated with the patentee (or its exclusive licensee) being an active competitor in the relevant market.

Broadly, all of this suggests that patentees who seek market exclusivity, either for themselves or for a small number of licensees, are able to obtain injunctive relief more easily than those who do not seek market exclusivity but instead only licensing fees, especially PAEs.

5. Behavior of the plaintiff

⁸³ *Id.* at 1990-91 (“Patent holders who competed with an infringer were granted a permanent injunction in the overwhelming majority of cases (84%; 150 of 179 cases), while patentees who were not market competitors rarely succeeded in obtaining injunctive relief (21%; 8 of 39 cases).”).

⁸⁴ Seaman 2016, 1988 (noting that PAEs received injunctions in the district court on 16% of the time); *id.* at 1952-53 (noting that “while the vast majority of patentees still obtain injunctive relief following eBay, [patent assertion entities] rarely do.”). PAEs are somewhat more successful on appeal to the Federal Circuit, though the sample is small: *see* Holte & Seaman 2017, 200.

⁸⁵ Seaman 2016, 1953.

The Federal Circuit recently held that laches, or undue delay, is a defense that bars injunctive relief even when courts find infringement of valid and otherwise enforceable patents.⁸⁶ Under the *eBay* approach this traditional equitable factor may be relevant to the balance of hardships or irreparable harm.⁸⁷ Presumably courts would consider other traditional equitable factors relating to the behavior of the plaintiff, such as the requirement that the plaintiff have “clean hands,” in appropriate circumstances. However, these equitable factors have to date not played a major role in denial of injunctive relief in respect of an otherwise enforceable patent.⁸⁸

6. Tailoring

U.S. courts have tailored injunctive relief to fit the particular circumstances of patent cases and to avoid inequitable results.⁸⁹ In particular, “[c]ourts sometimes will delay the full

⁸⁶ *SCA Hygiene Prod. Aktiebolag v. First Quality Baby Prod., LLC* (Fed. Cir. 2015, p.1317) (U.S.).

⁸⁷ *Id.* at 1331.

⁸⁸ The most prominent invocation of unclean hands is in respect of the defense of “inequitable conduct,” which while frequently pled is very rarely proven. *See Therasense, Inc. v. Becton, Dickinson, & Co.* (Fed. Cir. 2011, p. 1285) (en banc) (“Inequitable conduct is an equitable defense to patent infringement that . . . evolved from a trio of Supreme Court cases that applied the doctrine of unclean hands to dismiss patent cases involving egregious misconduct.”).

⁸⁹ *See generally* Golden 2012. In *Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2013, p.1370) (U.S.) (*Apple III*) the Federal Circuit noted that “a delay in enforcement may make an injunction more equitable and, thus, more justifiable in any given case.”).

effectiveness of injunctions to avoid some of the special disruption or other hardship that an immediately effective order might cause.”⁹⁰ Such tailoring has included a stay of the effect to allow redesign,⁹¹ or a “sunset” provision, allowing the infringer to continue to sell into an existing market,⁹² or both.⁹³ One court has suggested that the Federal Circuit “has expressed a preference for injunctive relief that is tailored to minimize disruptions to businesses and consumers.”⁹⁴ In some of these cases a significant concern is the hardship to the infringer’s customers, rather than that to the infringer itself.⁹⁵

A stay may also be granted pending appeal, but the purpose of such a stay is to mitigate the risk of injustice if the trial decision is reversed, and the considerations are generally different – in particular, courts consider the likelihood of success on the merits when analysing a motion for

⁹⁰ Golden 2012, 1461.

⁹¹See, e.g., *B. Braun Melsungen AG v. Terumo Med. Corp.* (D. Del. 2011, p.524) (U.S.); *Metso Minerals, Inc. v. Powerscreen Int’l Distribution Ltd.* (E.D.N.Y. 2011, p.77) (U.S.).

⁹²*Broadcom Corp. v. Qualcomm Inc.* (C.D. Cal. 2007) (U.S.) *aff’d on this point Broadcom Corp. v. Qualcomm Inc.* (Fed. Cir. 2008, p.704) (U.S.).

⁹³*Broadcom Corp. v. Emulex Corp.* (C.D. Cal. 2012) (U.S.) *aff’d Broadcom Corp. v. Emulex Corp.* (Fed. Cir. 2013) (U.S.).

⁹⁴*Metso Minerals, Inc. v. Powerscreen Int’l Distribution Ltd.* (E.D.N.Y. 2011, p.77) (U.S.), citing *Broadcom Corp. v. Qualcomm Inc.* (Fed. Cir. 2008, p.704) (U.S.) and *Verizon Servs. Corp. v. Vonage Holdings Corp.* (Fed. Cir. 2007, p.1311 n.12) (U.S.).

⁹⁵See, e.g., *Broadcom Corp. v. Emulex Corp.* (Fed. Cir. 2013) (U.S.); *Broadcom Corp. v. Qualcomm Inc.* (Fed. Cir. 2008) (U.S.).

a stay pending appeal.⁹⁶ The effect of a stay pending appeal may be to allow the infringer time to design around the patent, but its purpose is different.

7. Complex products

As already indicated in the discussion of the causal nexus requirement, U.S. courts have developed particular aspects of the law governing the provision of injunctive relief in patent cases involving complex products. In his concurrence in *eBay*, Justice Kennedy suggested that an injunction might not serve the public interest “[w]hen the patented invention is but a small component of the product the [infringer] seek[s] to produce.”⁹⁷ This advice appears to have taken root at the district court level: “[w]hen a patent is found to cover a small component, district courts rarely grant an injunction.”⁹⁸ In such cases the district courts are reluctant to grant an injunction even when the patentee and infringer are competitors.⁹⁹

⁹⁶*See E.I. DuPont De Nemours & Co. v. Phillips Petroleum Co.* (Fed. Cir. 1987, p.278) (U.S.) (“In considering whether to grant a stay pending appeal, this court assesses movant’s chances for success on appeal and weighs the equities as they affect the parties and the public.”); *see also Hilton v. Braunskill* (U.S. 1987, p.776) (U.S.) (discussing factors relevant to granting a stay pending appeal).

⁹⁷*eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006, p.396) (U.S.).

⁹⁸ Seaman 2016, 1998 (noting also that the effect is statistically significant); *see also id.* at 1998 n.304 (noting that “District courts only granted injunctions 14% of the time (2 of 14 cases) where the district court found that the patent covered a ‘small component.’”).

⁹⁹*Id.* at 1991-92.

In *Apple IV*, the Federal Circuit emphasized that the requirement that there be a causal nexus between the infringement and the irreparable harm suffered by the patentee applies even when the injunction is narrowed to apply only to an infringing feature rather than to the infringing product.¹⁰⁰ This implies that an injunction should not be granted if the patented technology does not significantly increase the product's desirability.

8. Standard essential patents

Another relevant circumstance is whether the asserted patent is a standard essential patent. While the Federal Circuit has rejected any *per se* rule that injunctions are unavailable with respect to standard essential patents, it confirmed that commitments to license on fair, reasonable, and non-discriminatory (FRAND) terms are relevant when analyzing the entitlement to injunctive relief.¹⁰¹ The court has explained that, on the one hand, “[a] patentee subject to FRAND commitments may have difficulty establishing irreparable harm.”¹⁰² But, “[o]n the other hand, an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect.”¹⁰³ These issues are discussed in greater detail in Chapter 5.

¹⁰⁰*Apple, Inc. v. Samsung Elecs. Co., Ltd.* (Fed. Cir. 2015, p.640) (U.S.) (*Apple IV*).

¹⁰¹ *Apple, Inc. v. Motorola, Inc.* (Fed. Cir. 2014, p.1331) (U.S.).

¹⁰² *Id.* at 1332.

¹⁰³ *Id.*

C. England

In England, the principles on which an injunction is granted or denied in the context of patent law are the same as for property rights generally, including rights in land.¹⁰⁴ It is well established in English law that the grant of a permanent injunction is discretionary in principle, but a plaintiff whose legal right has been violated is presumptively, or “prima facie,” entitled to the grant of an injunction, and it is said that “the court will only rarely and reluctantly permit such violation to occur or continue.”¹⁰⁵ The primary test is whether the effect of the grant of the injunction would be grossly disproportionate to the right protected.¹⁰⁶ The discretionary nature of

¹⁰⁴The power to grant injunctive relief stems from the inherent jurisdiction of the courts of equity, which was conferred on the Supreme Court of Judicature by the fusion of the courts of common law and equity in the late nineteenth century.

¹⁰⁵*Jaggard v. Sawyer* (Civ 1995, p.202) (UK); see also *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 8) (UK) (summarizing the law as being that a claimant is “prima facie” entitled to an injunction to restrain a person from committing an act which invades the claimant's legal right, and stating that “it is only in special circumstances that the court will exercise its discretion to award damages in lieu of an injunction”); and *Banks v. EMI Songs Ltd.* (No 2) (Ch 1996, p.457) (UK) (“The normal rule is that an injunction will be granted when there has been an infringement of a proprietary right, such as a copyright.”)

¹⁰⁶*Navitaire Inc. v. easyJet Airline Co. Ltd.* (No.2) (Ch 2005, p.250) (UK), quoted with approval in *Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 24) (UK); see also *id.* at ¶ 25 (stating that for refusal of a permanent injunction “[t]he test is whether enforcement would be ‘grossly disproportionate’”); see similarly *Jaggard v. Sawyer* (Civ 1995, p.208) (UK), per Millett LJ (referring to “a loss out of all proportion to that which would be suffered by the plaintiff if it were refused”).

injunctive relief is not considered inconsistent with proprietary rights, because the relief itself, as an equitable remedy, is inherently discretionary.¹⁰⁷

If injunctive relief is refused, damages are normally awarded in lieu thereof.¹⁰⁸ If actual loss cannot be proven as a consequence of the violation of the right, damages will normally be awarded on the basis the amount of money that could reasonably have been demanded by the plaintiff for her consent to the breach.¹⁰⁹ This is essentially the same “hypothetical negotiation” measure that is used when assessing damages for past infringement when the patentee does not, or cannot, claim lost profits.¹¹⁰

1. Traditional Principles

In *Shelfer v City of London Elec. Lighting Co.*,¹¹¹ AL Smith LJ said that as “a good working

¹⁰⁷See *Jaggard v. Sawyer* (Civ 1995, p.207) (UK), per Millett LJ (stating that “references to the ‘expropriation’ of the plaintiff’s property are somewhat overdone, not because that is not the practical effect of withholding an injunction, but because the grant of an injunction, like all equitable remedies, is discretionary”).

¹⁰⁸The power to grant damages in lieu of an injunction as compensation for the future continued violation of the right stems from the Chancery Amendment Act 1858, 21 & 22 Vict. c. 27, s. 2 (Lord Cairns’ Act); see *Jaggard v. Sawyer* (Civ 1995, p.204) (UK).

¹⁰⁹*Jaggard v. Sawyer* (Co Ct 1993, p.202-03, 213) (UK), relying on *Wrotham Park Estate Co. v. Parkside Homes Ltd.* (Ch 1974) (UK). This approach is often referred as the “Wrotham Park basis” for assessing damages.

¹¹⁰*HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 13) (UK).

¹¹¹*Shelfer v. City of London Elec. Lighting Co.* (Civ 1895) (UK).

rule” an injunction might properly be refused, and damages granted in lieu, if the following conditions were all satisfied:

(i) if the injury to the plaintiff's legal right is small;

(ii) and is one which is capable of being estimated in money;

(iii) and is one which can be adequately compensated by a small money payment;

(iv) and the case is one in which it would be oppressive to the defendant to grant an injunction, damages in lieu of an injunction may be awarded.

These are only guidelines, not a test,¹¹² but have been influential and are widely considered when the refusal of an injunction is in issue.

2. Proportionality

In practice, it appears that the most important consideration is the fourth.¹¹³ The word

¹¹²*HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 8) (UK) (“Subsequent cases have emphasised that AL Smith LJ's good working rule is only that: it is not a statute or straightjacket.”)

¹¹³*Jaggard v. Sawyer* (Civ 1995, p.208) (UK) per Millett LJ (“The outcome of any particular case usually turns on the question: would it in all the circumstances be oppressive to the defendant to grant the injunction to which the plaintiff

“oppressive” is understood to mean that “the effect of the grant of the injunction would be grossly disproportionate to the right protected.”¹¹⁴ The harm to the defendant from the grant of an injunction must be substantial for it to be oppressive, and given that the injury to the plaintiff’s legal right is small, it follows that the grant would be disproportionate. Moreover, “[t]he word ‘grossly’ avoids any suggestion that all that has to be done is to strike a balance of convenience.”¹¹⁵

The most common type of property case in which an injunction is refused is “where the plaintiff has sought a mandatory injunction to pull down a building which infringes his right to light or which has been built in breach of a restrictive covenant,”¹¹⁶ in circumstances in which the loss to the plaintiff resulting from the breach is small. Though the cases do not use the term, this is a classic case in which the defendant has incurred substantial sunk costs, and substantial value expected from that investment would be lost if the injunction were enforced.

The UK courts have recognized that the harm may be disproportionate even if the injunction is not enforced but is instead used for bargaining leverage. As was famously said, in

is prima facie entitled?”).

¹¹⁴ *Navitaire Inc. v. easyJet Airline Co. Ltd.* (No.2) (Ch 2005, p.250) (UK), quoted with approval in *Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 24) (UK); *see also id.* at ¶ 25 (“[A]lthough the case for withholding the injunction has to be strong, it is clear that a permanent injunction can be withheld, indeed even on a permanent basis. The test is whether enforcement would be ‘grossly disproportionate.’”); and *see similarly Jaggard v. Sawyer* (Civ 1995, p.208) (UK), per Millett LJ (referring to “a loss out of all proportion to that which would be suffered by the plaintiff if it were refused”).

¹¹⁵ *Navitaire Inc. v. easyJet Airline Co. Ltd.* (No.2) (Ch 2005, p.250) (UK).

¹¹⁶ *Jaggard v. Sawyer* (Civ 1995, p.208) (UK).

such a case an injunction would “deliver over the Defendants to the Plaintiff bound hand and foot, in order to be made subject to any extortionate demand that he may by possibility make.”¹¹⁷ Thus the concern is not solely the waste which would be incurred if the building were actually torn down, but the injustice entailed by giving such bargaining leverage to the plaintiff.

3. Adequacy of damages

The second *Shelfer* factor asks whether the value of the injury to the plaintiff’s right is capable of being estimated in money. This is essentially the same question as whether damages would be an adequate remedy under the *eBay* test.¹¹⁸ The second *Shelfer* factor nonetheless plays a very different role from irreparable harm under *eBay*, because it is a condition for refusing, not granting, an injunction. Under *eBay* the patentee’s failure to establish irreparable harm often justifies refusal of injunctive relief. In contrast, under *Shelfer*, if the right is capable of being estimated in money, an injunction will nonetheless be granted unless doing so would be oppressive. Adequacy of damages is important only where the effect of the injunction would be grossly disproportionate, in which case an injunction might nonetheless be granted if damages would not be adequate. This scenario appears to be rare, however.

Similarly, under the first and third *Shelfer* factor, the loss to the plaintiff must be small,

¹¹⁷*Isenberg v. East India House Estate Co. Ltd.* (Ct Ch 1863, p.641) (UK) per Lord Westbury LC, quoted in *Jaggard v. Sawyer* (Civ 1995, p.207) (UK), and referred to *id.* at 208.

¹¹⁸See *Shelfer v. City of London Elec. Lighting Co.* (Civ 1895, p.845) (UK) per Lindley LJ (remarking that an injunction might properly be refused in cases “where an action for damages is really an adequate remedy”).

even if the loss to the defendant is disproportionately larger. In cases in which injunctive relief is found to be disproportionate, it is typically also the case that the objective injury to the plaintiff appears to be small, and there are few cases in which an injunction is granted even though its effect would be disproportionate, on the basis that the harm to the plaintiff is large.¹¹⁹

4. Status of the plaintiff

The UK courts generally do not consider whether the plaintiff really wanted to enforce exclusivity, or was willing to license.¹²⁰ An exception is the Court of Appeal decision in *Gafford v Graham*, in which the Court of Appeal refused to grant an injunction ordering the demolition of a building built in breach of a restrictive covenant, in part because the plaintiff was willing to accept money.¹²¹ However, this was also a case in which granting the injunction was expected to have a disproportionate effect. Arnold J in *HTC Corp. v. Nokia Corp.*, a patent case, recognized the authority of *Gafford* on this point,¹²² but he went on to hold that whether the patentee sought market exclusivity or leverage in licensing negotiations is irrelevant to whether an injunction should be granted.

¹¹⁹Though *Shelfer* itself might be an example, as the injunction was granted on the basis that the injury to the plaintiff was not small, nor capable of being estimated in money, without consideration of proportionality: *see id.* at 848, per Smith LJ.

¹²⁰Generally, as in e.g. *Jaggard v. Sawyer* (Civ 1995) (UK), there is no discussion of this issue at all.

¹²¹ *Gafford v. Graham* (Civ 1998, p.84-86) (UK).

¹²²*HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 11) (UK).

5. Behavior of the plaintiff

As an injunction is an equitable remedy, traditional equitable bars to relief apply, including laches (unreasonable delay) and acquiescence.¹²³ The requirement that the party seeking relief must come to equity with clean hands applies in principle. However, there appear to be few if any cases in which this played a significant role in denying injunctive relief on the facts.

Beyond this, in one case an injunction was refused in part because the plaintiff had not sought an interlocutory injunction, though there was no question of laches or acquiescence;¹²⁴ and it has been suggested that an injunction will not be granted if the plaintiff, knowing of the defendant's actions, stands by without acting on his rights.¹²⁵ However, these have been cases in which the effect of the injunction would have been disproportionate to the harm suffered by the plaintiff. The principle here appears to be that a rights owner cannot obtain an injunction with disproportionate effect if the plaintiff, by acting more promptly, might have enforced its rights with less burden on the defendant.

6. Behavior of the defendant

If the defendant acted “in good faith and in ignorance of the plaintiff's rights” this will

¹²³See, e.g., *Gafford v. Graham* (Civ 1998) (UK) (refusing an injunction due to acquiescence).

¹²⁴*Jaggard v. Sawyer* (Civ 1995, p.209) (UK).

¹²⁵*Gafford v. Graham* (Civ 1998, p.73-74) (UK).

weigh against an injunction.¹²⁶ That is true even if the defendant might in principle have ascertained her true rights in advance.¹²⁷ Conversely, the usual view is that a defendant who has behaved badly, in particular by proceeding with knowledge that it would be acting in violation of the plaintiff's rights, would not be entitled to relief from an injunction even if the effect would be disproportionate.¹²⁸ However, the English courts appear very reluctant to grant an injunction which would be oppressive, particularly those which would involve pulling down a building, and such injunctions have sometimes been refused even in the face of bad-faith conduct by the defendant.¹²⁹

7. Effect of the EU Enforcement Directive

As noted above, the EU Enforcement Directive provides that courts may issue an injunction for the infringement of IP rights and that damages in lieu may be granted under certain

¹²⁶*Jaggard v. Sawyer* (Civ 1995, p.209) (UK); and similarly, *Jaggard v. Sawyer* (Co Ct 1993, p.209) (UK) (refusing an injunction, in part because the defendants acted “in good faith and in the not unreasonable belief” that they were entitled to make use of road).

¹²⁷*Jaggard v. Sawyer* (Co Ct 1993, p.199) (UK) (noting that the defendant “might have shown more care in the investigation of his position. I put that down to his inexperience in a complicated situation”).

¹²⁸*Jaggard v. Sawyer* (Civ 1995, p.209) (UK); *Shelfer v. City of London Elec. Lighting Co.* (Civ 1895, p.848) (UK).

¹²⁹See *Gafford v. Graham* (Civ 1998, p.79) (UK) (noting that the defendant had built “in blatant and calculated disregard of the plaintiff's rights.”); *Wrotham Park Estate Co. v. Parkside Homes Ltd.* (Ch 1974) (UK) (noting that the defendant built houses after having been served with the writ claiming breach of the restrictive covenant).

conditions.¹³⁰ It has not been specifically implemented in the UK, on the view that the court's existing general powers under UK law are sufficient to ensure compliance with the relevant provisions of the Directive.¹³¹

Even so, the EU Enforcement Directive has been referred to in several cases, and in a 2013 decision in *HTC Corp. v. Nokia Corp.*, Arnold J stated that in light of the EU Enforcement Directive,

the time has come to recognise that, in cases concerning infringements of intellectual property rights, the criteria to be applied when deciding whether or not to grant an injunction are those laid down by art.3(2): efficacy, proportionality, dissuasiveness, the avoidance of creating barriers to legitimate trade and the provision of safeguards against abuse.¹³²

It is doubtful whether this is significantly different from the traditional UK position, at least so far as the requirement of proportionality is concerned.¹³³ The factors set out in Article 13 for refusing

¹³⁰Directive 2004/48/EC, arts. 11, 12.

¹³¹*HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 21) (UK)..

¹³²*Id.* at ¶ 26. *See also* Ohly 2009, 274 (“Although the Enforcement Directive aims at a high standard of protection, it does not unilaterally benefit right holders. While the need for effective protection of intellectual property is evident, the principle of proportionality must also be taken into account.”).

¹³³In *Vestergaard Frandsen A/S v Bestnet Europe Ltd.* (Civ 2011, ¶ 56) (UK) Jacob LJ raised the issue of whether traditional English law principles of injunctive relief embody the concept of proportionality, and remarked “I rather think they do.” In *Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 23-25) (UK), Jacob LJ expressly approved Pumfrey

injunctive relief have not been specifically discussed.

8. Tailoring

The leading case on staying a permanent injunction is *Virgin Atlantic v. Premium Aircraft*. The Court of Appeal held that the test for staying a permanent injunction is the same “grossly disproportionate” test that applies to denying the injunction.¹³⁴ On the facts, the Court of Appeal granted a two-month period of “runoff” allowing the infringer to use the patented technology to fulfill an existing order, on the condition that the infringer would pay a substantial royalty.¹³⁵ The Court emphasized as an important factor in granting the stay that the infringer would not be directly

J’s test in *Navitaire Inc. v. easyJet Airline Co. Ltd.* (No.2) (Ch 2005, p.250) (UK), which was based on traditional *Shelfer* factors, as being consistent with Article 3 of the Enforcement Directive. In *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 32) (UK), Arnold J remarked that the practical effect of the approach he adopted, based on the Enforcement Directive is likely “little different to Pumfrey J’s test of ‘grossly disproportionate,’” and in summarizing his conclusion at ¶ 74, Arnold J referred to the *Shelfer* factors. In *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* (Pat 2017, ¶ 25) (UK) Birss J stated that “when the holder of an intellectual property right has established infringement and a threat and intention to infringe in future, an injunction will normally be granted,” saying this would be consistent with the Art 3 of the Directive.

¹³⁴*Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 25) (UK). The effective period of the carve-out was approximately two months; the decision was December, but until April 20 it was considered on the basis of a balance of convenience, as being a stay pending appeal. From April 20 to end of June, it was considered on the basis of proportionality: *id.* at ¶ 29.

¹³⁵*Id.* at ¶ 31, 33.

competing with the patentee with infringing products during this period.¹³⁶

In *Illinois Tool Works Inc. v. Autobars Co. (Servs.) Ltd.*¹³⁷ the court granted a three month stay of a permanent injunction, to allow the infringer to launch a non-infringing product. This was justified primarily on general public interest grounds, namely the potential loss of employment in times of high general unemployment.¹³⁸

9. Complex products

Arnold J's decision in *HTC Corp. v. Nokia Corp.* is important as being the only UK case dealing with injunctive relief for infringement of a patent related to a complex product. As noted above, Arnold J considered that the key issue was whether the grant of an injunction would be “grossly disproportionate” to the right protected. He stated that, “perhaps the single most important consideration,” in assessing proportionality, “is the availability and cost of non-infringing alternatives,”¹³⁹ and “[i]f non-infringing alternatives are available at non-prohibitive cost. . . then there is unlikely to be a problem of patent hold up.”¹⁴⁰

On the facts, the patented technology was a modulator circuit, there were non-infringing

¹³⁶*Id.* at ¶ 38.

¹³⁷*Illinois Tool Works Inc. v. Autobars Co. (Servs.) Ltd.* (Ch 1974) (UK).

¹³⁸*Id.* at 375.

¹³⁹*HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 65) (UK).

¹⁴⁰*Id.* at ¶ 67.

chips currently available, and HTC would be able to source other non-infringing alternatives given sufficient time.¹⁴¹ The cost of switching was not prohibitive.¹⁴² HTC's main argument that an injunction would be disproportionate was that it would take a significant amount of time—though probably something less than 18 months—to redesign its phones, and during that period an injunction would keep its phones off the market.¹⁴³ Thus it was design-around time, not design-around cost, that was at issue. On the other side of the equation, Arnold J also held that “[t]his is not a case in which the injury to the patent is small, capable of being estimated in money and adequately compensated by a relatively small money payment.”¹⁴⁴ Consequently, he granted the injunction.

In *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* Birss J granted an injunction in the context of a SEP. At first glance this appears striking, particularly in view of the great reluctance of U.S. courts to grant an injunction for a SEP. The difference is more apparent than real. Despite the injunction, there was no potential for holdup, as Birss J held the patentee, Unwired Planet, was only entitled to a license on FRAND terms, and in particular at the FRAND rate determined by Birss J in the same decision in which he granted the injunction. This means that Unwired Planet would not be able to use its injunction for bargaining leverage.

¹⁴¹*Id.* at ¶ 70.

¹⁴²*Id.* at ¶ 70.

¹⁴³*Id.* at ¶ 72.

¹⁴⁴*Id.* at ¶ 74.

D. Civil Law Systems

1. Traditional Principles

As a broad generalization, countries with civil law systems tend to award injunctive relief to a prevailing patentee routinely, and in some countries, effectively as a matter of right, so long as there is a real threat of future infringement.¹⁴⁵ In most cases this appears to be primarily as a matter of legal tradition and an absolutist approach to property rights generally, rather than as a matter of the provisions of the civil code itself.¹⁴⁶ Consequently, it has been suggested that these systems do have some flexibility in principle, and that the tendency to grant injunctive relief as an entitlement might stem from an absence of perceived need to refuse injunctive relief.¹⁴⁷

¹⁴⁵See Cotter 2013a, 245-46 (noting that “European courts appear to grant successful patentees permanent injunctions in the vast majority of cases,” and German courts “appear to read domestic law as entitling the prevailing patent owner to a permanent injunction as a matter of right,” and “the same is reputed to be true of the Netherlands and Switzerland”); *id.* at 305 (noting that Japanese courts “routinely” grant permanent injunctions); *id.* at 365 (noting that commentators indicate that courts in Taiwan and South Korea “generally award permanent injunctions to prevailing patent owners”).

¹⁴⁶For example, *see id.* at 245 n.109 (noting that the relevant language of the German Patent Act is permissive rather than mandatory).

¹⁴⁷See *id.* at 246-47 (noting that the European attitude to injunctive relief might change if “trolling” becomes more common, and noting various commentators suggesting “that European courts may show more flexibility than is commonly believed, if and when perceived abuses arise”). In one instance China’s Supreme People’s Court (SPC) refused an injunction to a successful patentee on public interest grounds, in particular environmental protection. *Id.* at

In addition, competition law may provide a basis for refusing injunctive relief, a fact we discuss in more detail in Chapter 6. In several countries it has been judicially recognized that injunctive relief may be denied for this reason in the context of SEPs, and injunctions have been denied to SEP holders in some countries. Competition law is limited, however, because some form of market power is normally required. While this may be established for SEPs, patents reading on complex products, like other patents, do not generally entail market power.

2. Abuse of rights

A more general potential restraint on the grant of injunctive relief is the doctrine of abuse of rights, which may apply when IP rights are exercised in lawful, yet nonetheless abusive, ways. The doctrine serves as a corrective mechanism that resorts to such standards of behavior by the right holders as morality, good faith, fairness, proportionality as well as reasonableness and social functions of rights. Its application generally leads to limiting the exercise of rights. The abuse of rights doctrine is recognized by European Union law, as well as the civil laws of many European

states, including EU Members such as France,¹⁴⁸ Germany,¹⁴⁹ Italy,¹⁵⁰ and the Netherlands,¹⁵¹ and non-members, like Switzerland.¹⁵² The doctrine of abuse of rights is also recognized by many Asian nations, including Japan and Korea.¹⁵³

In these countries, injunctive relief may be refused if sought in circumstances deemed abusive. Though various legal systems differ in the way they define abusive behavior of right holders, there is a significant degree of convergence. Generally speaking, the assertion of an IP right may be deemed abusive if that enforcement: (i) is undertaken for the sole purpose of harming

¹⁴⁸ The abuse of rights doctrine in France has its roots in the French Civil Code, see Code Civil [C. civ.] [Civil Code] art. 1382 (Fr.).

¹⁴⁹ Bürgerliches Gesetzbuch [BGB] [Civil Code] § 226 (Ger.) (the exercise of a right is not permitted if its only purpose is to cause damage to another); *id.* at § 242 (requiring good faith in the execution of obligations); *id.* at § 826 (providing for restitution where damage is inflicted on another in a manner contrary to public policy).

¹⁵⁰ Art. 833 Codice civile [C.c.] (It.) (prohibiting acts with no other purpose than harming or harassing others).

¹⁵¹ Artikel 3:13 BW (Neth.) (a right may be abused when: (1) it is exercised with no other purpose than to damage a third party; (2) it is exercised for a purpose other than the one for which it was granted; and (3) the exercise of the right results in disparity between the interests which are served by its effectuation and the interests which are damaged as a result thereof).

¹⁵² Schweizerisches Zivilgesetzbuch [ZBG] [Civil Code], SR 210, art. 2 (Switz.) (every person must act in good faith in the exercise of their rights and obligations, and the manifest abuse of a right is not protected by law).

¹⁵³ For recent commentary on the abuse of rights doctrine, *see, e.g.*, Sganga & Scalzini 2017; Léonard 2017, 10; Léonard 2016; Steppe & Léonard 2017; Nagakoshi & Tamai 2016. *See also* Cotter 2013a, 305, 365 (noting the availability of general abuse of rights doctrine in patent cases in Japan and Korea.).

the infringer, (ii) results in harm to the infringer that is disproportionate to the benefit that accrues to the rightsholder, (iii) upsets reasonable expectations that the rightsholder has induced in the infringer, or (iv) is contrary to the social or economics aims of IP law.¹⁵⁴

Circumstances that have been found sufficiently abusive to be grounds for refusing a permanent injunction against patent infringement have so far been narrow. Courts in both Korea and Japan, for example, have held that it can constitute an abuse of right to seek injunctive relief against infringement of a patent that will clearly be invalidated in a separate invalidation proceeding.¹⁵⁵ Both countries have also applied the doctrine to refuse injunctive relief in cases enforcing standard essential patents.¹⁵⁶

In summary, while the abuse of rights doctrine originated as a general corrective mechanism which might therefore in principle provide flexibility to refuse injunctive relief when the burden on the infringer is disproportionate to the right protected, it has developed into a narrower remedy which, to date, is not normally invoked in such circumstances.¹⁵⁷

¹⁵⁴ See generally sources cited *supra* note 147.

¹⁵⁵ See Saikō Saibansho (S. Ct. 2000) (Japan) (Kilby patent case); *LG Electronics, Inc. v. Daewoo Electronics, Inc.* (S. Ct. 2012) (Kor.).

¹⁵⁶ In the SEP context, the Japanese IP High Court, in *Samsung Elecs. Co. v. Apple Japan LLC* (IP High Ct. 2014) (Japan) (FRAND II) and *Samsung Elecs. Co. v. Apple Japan LLC* (IP High Ct. 2014) (Japan) (FRAND III), refused to grant preliminary injunctions for the infringement by Apple of Samsung's FRAND-encumbered Standard-essential-patent on the basis of an abuse of right; similarly in Korea it is an abuse of patent rights for a FRAND committed patent holder to seek an injunction when the patent holder violates its duty to negotiate in good faith and merely tries to maintain its market dominance. *Samsung Electronics Co. Ltd. v. Apple Korea Ltd.* (Dist. Ct. 2012) (Kor.).

¹⁵⁷ One possible exception is that the Tokyo District Court, *Tōkyō Chihō Saibansho* (Tokyo Dist. Ct. 2015) (Japan)

E. International Context & TRIPS

Finally, we note that a network of international agreements also influences the national rules discussed above. For example, the TRIPS Agreement, to which the U.S., UK, and all other EU Members are signatories, explicitly recognizes patentees' right to demand an injunction from judicial authorities against an infringer.¹⁵⁸ At the same time however, TRIPS also provides that remedies "shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse,"¹⁵⁹ and requires that remedies be "fair and equitable,"¹⁶⁰ a phrase that in the context of international trade agreements is usually equated with the principle of proportionality, good faith, due process and non-discrimination.¹⁶¹

In addition, TRIPS explicitly recognizes that signatories may deny injunctive relief in a number of circumstances, including when doing so would adversely impact competition (i.e.,

(Cu-Ni-Si Alloy), stated that it would be inequitable to grant an injunction on the basis of disproportionality between the infringement and the burden on the infringer. However, this decision has little precedential value as it was a lower court decision and the legal basis for the denial of injunction was not clear.

¹⁵⁸ TRIPS Agreement, art. 44(1).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at art. 44(2).

¹⁶¹ Malbon et al. 2014, 628.

violate competition law),¹⁶² when the accused infringer unwittingly acquired the infringing subject matter (e.g., the manufacturer of a complex product that is later revealed to incorporate an infringing component),¹⁶³ and when doing so would otherwise “not unreasonably conflict with a normal exploitation of the patent [or] unreasonably prejudice the legitimate interests of the patent owner”¹⁶⁴ (an exception in which the *eBay* standard arguably falls¹⁶⁵).

IV. Recommendations

In light of arguments for and against injunctive relief summarized in Part II, and after surveying in Part III approaches adopted around the world, we outline recommendations for how courts should approach the questions of whether to award injunctions against patent infringement and how such injunctions should be crafted. These recommendations are far from comprehensive: they do not provide precise guidance on how courts should weigh a variety of additional factors that might properly influence a decision on injunctive relief. This lack of comprehensiveness reflects partly the multiplicity of such potential factors and partly this project’s focus on concerns particular to complex products. The lack of comprehensiveness also reflects the fact that, although we have found common ground with respect to certain basic principles for injunctive relief, we

¹⁶² TRIPS Agreement, arts. 40, 44(2).

¹⁶³ TRIPS Agreement, art. 44(1).

¹⁶⁴ TRIPS Agreement, art. 30.

¹⁶⁵ *See* Cotropia 2008, 580.

have a plurality of views with respect to even such fundamental questions as whether there should be a presumption in favor of granting injunctive relief after infringement has been shown and a continuing threat of infringement established.¹⁶⁶ Although such background disagreements limit the scope of what we affirmatively recommend, we believe they also highlight the robustness of the principles that the group as a whole embraces. These principles appear sound even to people with widely varying views about the general advisability of injunctive relief.

A. Basic Principles for Injunctive Relief

First, and perhaps foremost, we **recommend** against the adoption of rules resulting in the automatic issuance of injunctive relief in all cases in which a patentee prevails in a suit for patent infringement. As discussed in greater detail below, we **recommend** instead that courts retain and, in appropriate circumstances, exercise discretion to deny injunctive relief when issuance of an injunction would otherwise generate costs or burdens for others that are disproportionate to the nature of the adjudged infringement and to the noncompensable harms the patentee would suffer in the absence of an injunction.

Consistent with the above recommendations, we **recommend** that courts be afforded the flexibility and discretion to tailor injunctive relief in appropriate circumstances to avoid imposing unnecessary hardship on infringers or the general public. Examples of potential forms of tailoring

¹⁶⁶ We **recommend** the standard requirement that, for an injunction against infringement to be granted, there be some prospect of future infringement. But we will not focus on this point because it appears to be commonly satisfied in patent infringement cases, including complex product cases, in which a continuing course of conduct has been held to be infringing.

include granting a stay of the injunction’s enforcement to allow the infringer time to design around the patent, and limiting the scope of an injunction in a case involving a complex product so that the injunction precisely targets continued use of the infringing feature(s), rather than forbidding continued use or sale of an entire product.

Finally, in cases where injunctive relief is not granted, and damages have not separately compensated for future infringement,¹⁶⁷ we **recommend** that additional monetary damages in the form of an “ongoing reasonable royalty” be normally awarded as a substitute. We **recommend** that this ongoing royalty be calculated in accordance with the principle for determining a “reasonable royalty” for past infringement, without any special enhancement due to the ongoing reasonable royalty’s association with activity that occurs after the judgment of infringement.¹⁶⁸

B. Proportionality

We **recommend** that courts use the concept of “proportionality” as a limiting principle for injunctive relief. Attention to this principle can help balance concerns about patentee holdup and implementer holdout discussed in Part II of this chapter, and can likewise help balance interests in

¹⁶⁷ A damages award in the form of a lump sum that compensates for both past and future use of the patented technology would involve such compensation for future infringement. Some U.S. cases have upheld awards of damages in the nature of a lump-sum royalty payment based on an infringer’s expected sales. *See, e.g., Interactive Pictures Corp. v. Infinite Pictures, Inc.* (Fed. Cir. 2001, p.1384-85) (U.S.).

¹⁶⁸ While we use the term “royalty” in this sentence, we acknowledge that cases may arise in which patentees that were awarded lost-profits damages are denied injunctions due to proportionality concerns. We propose **further research** on the question of how ongoing damages should be calculated in such a case.

vindicating a patent owners' rights and in protecting legitimate interests of the public as well as adjudged or accused infringers. We believe that this broad principle is consistent with the law of a number of jurisdictions, including the EU Enforcement Directive (especially as interpreted in *HTC Corp. v. Nokia Corp.*);¹⁶⁹ more recent Communications from the European Commission;¹⁷⁰ traditional equitable principles applied in common law jurisdictions, including the UK and Canada;¹⁷¹ and the four-factor test for awarding permanent injunctions articulated by the Supreme

¹⁶⁹ See *HTC Corp. v. Nokia Corp.* (Pat 2013) (UK). See also Ohly, 2009, 274 (“Although the Enforcement Directive aims at a high standard of protection, it does not unilaterally benefit right holders. While the need for effective protection of intellectual property is evident, the principle of proportionality must also be taken into account.”).

¹⁷⁰ Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee: Guidance on certain aspects of Directive 2004/48/EC of the European Parliament and of the Council on the enforcement of intellectual property rights, COM(2017) 708 final, Nov. 29, 2017, <http://www.ipex.eu/IPEXL-WEB/dossier/files/download/082dbcc5600f605a01601049d9d101b8.do>, at 18 (stating, inter alia, that courts should ensure, on a case-by-case basis, that injunctions be consistent with the principle of proportionality; that injunctions “should have the minimal scope necessary to accomplish this objective”; and that it “is not necessary that the measures required by the injunction lead to a complete cessation of the IPR infringements”); Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee: Setting out the EU approach to Standard Essential Patents, COM(2017) 712 final, Nov. 29, 2017, <https://ec.europa.eu/docsroom/documents/26583/attachments/1/translations/en/renditions/native>, at 10 (similar).

¹⁷¹ See Gergen et al. 2012, 246 (“Under the traditional approach, if the patentee wins on validity and infringement, the patentee will be presumptively entitled to an injunction against continuing infringement. This presumption can be overcome by a showing of undue hardship—i.e., some form of disproportionate hardship—not by a mere showing that equipoise-style balancing of the equities at least ostensibly favors the infringer. The reliance from sunk investments and the hardship of potentially shutting down factories qualify as long as actual noncompensable harm to

Court of the United States in *eBay v. MercExchange*.¹⁷² Further, some version of a proportionality principle appears consistent with the TRIPS Agreement, as noted above.¹⁷³ Accordingly, we believe that proportionality-based tests can be applied in a broad variety of jurisdictions without need for legislative action.

That said, we also acknowledge that this recommendation leaves open various substantive, evidentiary, and procedural questions that impact the extent to which injunctive relief should be granted. Though we flesh out one framework for incorporating concerns of proportionality below, a degree of vagueness in our proposal is intentional. How individual jurisdictions answer these questions will depend on a multiplicity of factors, including general legal norms and commitments relating to the enforcement of private rights, the extent to which patent enforcement is treated as involving moral stakes, and perceptions about the relative dangers of abusive behavior by patentees and potential infringers, respectively.

1. General Recommendation

We generally **recommend** that an injunction against infringement not issue if the negative effects of the injunction on enjoined parties would be disproportionate to the nature of the

the plaintiff is relatively small. Importantly, however, the undue-hardship safety valve will only apply if the infringer has acted in good faith. Knowing violation by one who has notice or should have had notice of infringement at the time infringing conduct began will generally support a presumption that an injunction should issue.”).

¹⁷²See discussion *supra* Part III.B.1.

¹⁷³ See *supra* note 152 and accompanying text.

infringement and any noncompensable harm that the patentee will experience as a result of the absence of an injunction.

This recommendation applies to both preliminary and permanent injunctions. At the preliminary-injunction stage, however, “the nature of the infringement” factor might be better characterized as a factor concerned with what, at that preliminary stage, a court considers to be the likely nature of the alleged infringement.

Beyond this, there remains some work to be done in clarifying various details. Application of this recommendation requires an explication of the terms “nature of the infringement,” “negative effects,” “noncompensable harm,” including the public interest, and “disproportionate.” This is where we turn our attention next.

2. The Nature of the Infringement

The “nature of the infringement” in our general recommendation is meant to encompass at least two sets of concerns: (i) the scale of the infringement in relation to the overall scope of an infringing product or process, and (ii) various circumstances relating to the relative blameworthiness of infringing conduct or of the patent holder itself.

In the context of complex products, the scale of the infringement can be understood as relating to the extent to which the infringement involves a relatively minor or, at least, isolated component of a multi-component product that has numerous other valuable features. Infringement in such a circumstance might be viewed as comparable to constructing a large building overwhelmingly on one’s own land but, as it turns out, with a small sliver of the building’s footprint encroaching on another’s property.

Even a “small sliver” case of infringement might be viewed as substantially problematic if the infringement in question is willful and malicious. To deter such bad-faith conduct, courts and policymakers might want to deploy injunctions even when those injunctions inflict economic burdens much larger than the economic value of the “small sliver” of infringement itself. Accordingly, courts may wish to incorporate into their analysis of the nature of the infringement the relative blameworthiness of the enjoined party’s infringing conduct. On the side of an adjudged or accused infringer, relevant factors may include the extent to which (i) the adjudged or accused infringer knew or should have known that the conduct in question would be infringing; (ii) the adjudged or accused infringer had such actual or constructive knowledge before becoming substantially invested in a course of conduct later judged or alleged to infringe; and (iii) the adjudged or accused infringer engaged in reasonable and good-faith efforts to license or otherwise pre-clear pertinent patent rights (assuming such action was possible and non-futile) as opposed to engaging in holdout behavior or exhibiting recklessness with respect to such rights. Taking such factors into account can help prevent our recommended proportionality limitation on injunctive relief from protecting strategic holdout behavior by patent infringers who might otherwise anticipate that they can escape injunctive relief as long as they can successfully characterize their infringement as involving only a “small sliver” of a multi-featured product or process.

But we should emphasize that, in considering *relative* blameworthiness, courts may also weigh the extent to which a patentee may have behaved badly or otherwise contributed to the course of infringement about which the patentee now complains. On the side of the patentee, relevant factors with respect to relative blameworthiness may include the extent to which (i) the patentee contributed to delay in the adjudged or accused infringer’s appreciating the risk of potential infringement, whether this contribution came by the patentee’s failing to assert patent

rights promptly or otherwise; (ii) the patentee engaged in reasonable and good-faith efforts to license the claimed invention to the adjudged or accused infringer; and (iii) the patentee engaged in other behavior that either helps to render the infringement less blameworthy or otherwise helps to balance equities more favorably to the adjudged or accused infringer.

A traditional equitable principle related to such considerations of blameworthiness is the principle that, by acting badly, an infringer can forfeit any opportunity for relief from the effects of an injunction. Deliberate infringement of another's rights, with full knowledge that those rights were being infringed, is often cited as one traditional ground for denying relief from an injunction even when its negative effects on the infringer would otherwise be disproportionate. Given that the scope of rights under an individual patent and the validity of a patent's claims are often open to question, however, many situations involving infringement of patent rights are likely to involve a lesser degree of culpability. Further, the patent thickets that can envelop complex product markets could make patent clearance in such markets especially hard. Difficulties in evaluating the incremental worth of a claimed invention in relation to an overall complex product can likewise complicate assessment of the extent to which failures in negotiation reflect holdup, holdout, or simple good-faith disagreement. In short, the relative blameworthiness of patentee and infringer in a situation involving failed negotiations might be difficult to assess. Moreover, even when one party has clearly behaved both badly and worse than the opposing party, the level of culpability will often fall short of that of the knowingly and deliberately infringing trespasser.

Because of such murkiness, we decline to recommend any particular disqualifying rules, either strictly forbidding injunctions or strictly forbidding relief from an injunction, based on party misbehavior or lack of ideal behavior. Instead, we focus below on how such conduct can inform the disproportionality analysis for injunctive relief. Like questions about the extent to which and

manner in which a patentee needs to make a threshold showing of irreparable injury, we propose **further research** on the advisability and contents of such disqualifying rules.

3. Negative Effects

This subsection explains what we mean by “negative effects of the injunction on enjoined parties” and how a target’s ability to mitigate such negative effects should factor into the disproportionality calculus. Here, we also explain why we confine our general recommendation to negative effects on enjoined parties, rather than including negative effectives on third parties or the general public.

a) Negative Effects on Enjoined Parties

Negative effects on enjoined parties can include out-of-pocket expenses, opportunity costs, or other welfare losses experienced as a consequence of the injunction, whether resulting from cessation of relevant activities, payments for a patent license, product redesign, or otherwise.

Such costs can be especially large relative to the nature of any patent infringement in the context of complex products. This follows from the fact that an injunction might forbid production or distribution of an entire complex product or service even though only one of many value-adding components or aspects of the product or service is infringing. Because of the multicomponent, multiply innovative nature of the infringing product, the claimed invention is most likely only one of a large number of aspects of the product that contribute to its overall value. Hence, an injunction that stops manufacture or use of the overall product might inflict economic hardship on the

infringer that is far out of proportion to the value of the product's infringing aspect. Further, the claimed invention's operation within the product might be interrelated with that of other aspects of the product in complementary, synergistic, or otherwise complicated ways that make redesign of the product to exclude the claimed invention significantly more difficult than the simple removal and replacement of a largely isolated infringing module. Thus, even aside from the out-of-pocket expense needed to develop a non-infringing redesign, the time required for a non-infringing redesign might be substantial. During that time, the entire product will be kept off the market, even when the patented technology only contributes a small part of the overall value. As a result, a generic injunction that forbids the continuation of infringing activity and goes into immediate effect can be especially likely to require an extended shutdown of infringer activity, with the extensive economic effects described above. Although the adjudged infringer may attempt to obtain a license from the patentee for its continued activity, a profit-maximizing patentee would predictably use the leverage afforded by an injunction to extract much of the benefit to the adjudged infringer of avoiding its force. Consequently, a license in the wake of such an injunction might largely maintain the size of the negative effects of an injunction while shifting their form to that of a cash payout to the patentee. Hence, the amount of such a payout might mostly reflect the "holdup" value of the injunction, rather than the more fundamental economic value of the claimed invention.¹⁷⁴

¹⁷⁴ The leading article on this issue is Lemley & Shapiro 2007a. For a discussion of the relevant literature, *see* Chapter 7.

b) Negative Effects on Related Third Parties and the Public

In addition to the costs imposed on enjoined parties, many jurisdictions consider the negative effects an injunction might have on third parties or the public at large. Third parties that might suffer from an injunction are suppliers to an adjudged or accused infringer, downstream consumers, and intermediaries.¹⁷⁵ In addition, completely unrelated third parties can suffer as well. For example, an injunction that effectively takes a widely used communications technology off the market or that generates a substantial decrease in that technology's availability, affordability, or usability could disrupt the work and home lives not only of direct users of the technology, but also the work and home lives of virtually anyone, including government officials, who seek to communicate with the direct users.¹⁷⁶ Similarly, an extended shutdown of a manufacturing plant or communications center can negatively affect not only direct employees but also a much larger community or economic ecosystem in which they exist.

That said, some negative effects to the public from the enforcement of patents are to be expected as a normal incident of patent rights, and the existence of patent laws presumably reflects a judgment that such negative effects are counterbalanced by positive effects that render the

¹⁷⁵ See *i4i Ltd. Partnership v. Microsoft Corp.* (Fed. Cir. 2010, p.861-62) (U.S.) (“Here, the relevant ‘public’ includes not only individual consumers, but also companies that license infringing Word products and manufacturers that are part of Microsoft’s distribution channels.”).

¹⁷⁶ For example, the permanent injunction issued in *NTP v. RIM* raised serious concern among the roughly 3 million individuals using BlackBerry devices in the U.S. at the time. Indeed, the U.S. Department of Justice filed a brief in the case warning that “a substantial public interest . . . may be impaired” if the injunction were to impair BlackBerry usage by the 300,000 government employees using such devices at the time. See Noguchi 2005.

issuance and enforcement of patent rights generally in the public interest. As a result, advocacy of courts' general consideration of the public interest in issuing an injunction against patent infringement can seem to some to amount to an invitation to the courts to question or ignore general policy judgments embodied within the patent system. In light of such concerns, we have failed to reach consensus on the extent to which courts should consider the negative effects of injunctions on third parties or the general public as a basis for denying injunctive relief. Thus, we have not included such negative effects to third parties or the public in our general recommendation on proportionality.

On the other hand, we agree that, in deciding whether to issue injunctions, courts should consider, as a potential basis for denying injunctive relief, harms to the public that substantially outweigh the costs inherent in a functioning patent system—i.e., negative consequences to the public that are substantially beyond what a patentee could reasonably and legitimately have expected in vindication of its patent rights—to the extent such harms are likely to be realized. Such a requirement aligns with existing *de jure* compulsory licensing regimes, which generally take effect only in exceptional circumstances.¹⁷⁷ Examples of injunctions that could cause significant public harm might include those that would potentially reduce the availability of devices or products important to public health and safety, the preservation of national security, the uninterrupted operation of capital markets, and the functioning of a reliable and secure

¹⁷⁷ See *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 32) (UK) (“[T]he court must be very cautious before making an order which is tantamount to a compulsory licence in circumstances where no compulsory licence would be available. It follows that, where no other countervailing right is in play, the burden on the party seeking to show that the injunction would be disproportionate is a heavy one”). For further discussion of compulsory licensing regimes, see McManis & Contreras 2014.

transportation, power, telecommunications and computing infrastructure.

c) **Negative Effects and Mitigation**

Finally, we note that both adjudged infringers and third parties can often take action that mitigates the possible negative effects from an injunction, for example by switching to a close substitute product or substituting supply or customer relationships with entities who do not rely on the infringing product for relationships with entities who do. Moreover, as we discuss further below, a court itself might be able to mitigate the negative effects of an injunction by tailoring injunctive relief appropriately. Given the possibility that adjudged infringers and third parties could react in any of a number of ways to injunctive relief, a decision-maker might wonder which potential future scenarios “count” for assessing the expected negative effects of an injunction. Because the purpose of proportionality as a limit on injunctive relief is to avoid disproportionate awards to patentees and hardships to others, we **recommend** that relevant negative effects to adjudged infringers and, to the extent considered relevant, third parties, be limited to those that have some reasonable likelihood of actually occurring if adjudged infringers and third parties take reasonable mitigating measures in relation to an injunction. We discuss how we believe courts should proceed with respect to potential tailoring later in this chapter.

4. Noncompensable Harm to the Patentee

The noncompensable harm to the patentee encompasses the ways in which the patentee cannot be made whole through a purely monetary award, including an ongoing royalty, if

appropriate. Noncompensable harms could include competitive or other business harms that are difficult to quantify, loss of an ability to choose licensing partners or to structure licensing terms, and a potential need to file suit again if an ongoing royalty is not provided and the course of infringement continues or resumes.

Even patentees who might be characterized as “willing licensors” can suffer noncompensable harm. For one, even if a patentee is an indiscriminate licensor whose typical or desired licensing arrangement is in the nature of a bare lump-sum payment or running royalty, equity has commonly recognized that uncertainty about the proper value of damages (such as a reasonable royalty) and courts’ common lack of aptitude in price setting mean that monetary awards are an inadequate replacement for the capacity to license on privately agreed terms or not to license at all.¹⁷⁸ In addition, patent licenses are often structured in ways that channel licensee behavior, whether by explicitly limiting what a licensee may do or by providing incentives for licensees to meet certain goals. Monetary awards for past infringement necessarily fail to replicate such structure, and ongoing royalties generally lack them as well. Further, an attempt to replicate such more complicated arrangements between unwilling partners and through a court order might be problematic for all sides and could upset a more targeted licensing program. Finally, at least where the relevant patentees are business entities, patents are fundamentally held only to make money and, consequently, a so-called “willing licensor” is not so distinct from a supposedly “unwilling licensor” or competitor in terms of its ability to be satisfied with a large enough money payment.¹⁷⁹

¹⁷⁸ Golden 2007, 2152; Calabresi & Melamed 1972.

¹⁷⁹ *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 54-56) (UK).

Nonetheless, in the wake of the Supreme Court of the United States’s decision in *eBay*, U.S. district courts appear to have often treated patentees who are not competitors of adjudged or accused infringers, especially patentees who qualify as patent assertion entities (PAEs), as not suffering substantial noncompensable harm from the absence of an injunction and thus as subject to “a de facto rule against injunctive relief.”¹⁸⁰ The legal status of this de facto rule is murky,¹⁸¹ but it does raise the question of whether there should be a rule at least presumptively disqualifying PAEs or other forms of presumptively willing licensors from obtaining injunctive relief for patent infringement. This is another iteration of the question of whether there should be threshold tests or disqualifying rules for injunctive relief that adopt a more categorical approach than our recommended proportionality principle. As above, we propose **further research** on these questions.

5. Disproportionality

The final key term to define is “disproportionate,” the fulcrum term that determines when the negative effects to the enjoined party are such, relative to the nature of the infringement and threatened noncompensable harm to the patentee, that an injunction should be denied. Here we

¹⁸⁰ Seaman 2016, 1953; *see also* Part III.A.

¹⁸¹ Holte & Seaman 2017 (concluding that, on appeal, the Federal Circuit is more favorable toward injunctive relief for PAEs than district courts are at the trial level); *cf. eBay Inc. v. MercExchange, L.L.C.* (U.S. 2006) (U.S.) (language generally rejecting categorical treatment and suggesting that, under certain circumstances, a non-practicing entity may have a legitimate claim to injunctive relief).

define this term for purposes of our general recommendation and discuss why our recommendation is not limited only to situations in which harm to the patentee is not great.

a) Disproportionality Defined

For purposes of our general recommendation, disproportionality should be understood to require that the expected negative effects of an injunction substantially outweigh, rather than merely incrementally outweigh, the expected noncompensable harm to the patentee if an injunction is denied. This substantial outweighing should be such that a court believes that the resulting negative consequences threatened to the infringer are beyond what a patentee could reasonably and legitimately have expected in vindication of its patent rights.

However, we make no recommendation with respect to the precise formulation of such a rule. At least one jurisdiction has adopted a rule that injunctions be denied only when their negative effects are “grossly disproportionate,”¹⁸² and signaled that “the burden on the party seeking to show that the injunction would be disproportionate is a heavy one.”¹⁸³ It is not clear whether such differences in language or stated burden are associated with substantial practical differences in how a proportionality principle is applied and whether any such practical differences point in favor

¹⁸²*Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 25) (UK); this derives from Pumfrey J’s statement in *Navitaire Inc. v. easyJet Airline Co. Ltd.* (No.2) (Ch 2005, p.250) (UK), quoted with approval in *Virgin Atlantic v. Premium Aircraft* (Civ 2009, ¶ 24) (UK).

¹⁸³ *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 32) (UK) (“[W]here no other countervailing right is in play, the burden on the party seeking to show that the injunction would be disproportionate is a heavy one. I suspect that the practical effect of this approach is little different to Pumfrey J’s test of ‘grossly disproportionate.’”).

or against these variations on a proportionality principle. We propose **further research** on these issues.

Though we take no position on the exact degree of disproportionality required, we do intend for the disproportionality highlighted by our general recommendation to contrast with a more “equipoise-style balancing of the equities” to determine whether to grant injunctive relief.¹⁸⁴ Though a case could be made for something more in the nature of a “preponderance of the hardships” standard for issuing injunctions, various objections to equipoise-style balancing can be made in the context of permanent injunctions. For example, equipoise-style balancing may (i) insufficiently respect the legislative judgment that a patentee should have a “right to exclude”; (ii) provide insufficient assurance to patentees or would-be patentees that patent rights will be respected; and (iii) insufficiently deter holdout behavior and other forms of inadequate attentiveness to patent clearance. Equipoise-style balancing might be more justified in relation to preliminary injunctions and is the general approach followed by the UK, for example, with respect to such preliminary relief. But because justified denial of an injunction based on disproportionality will a fortiori mean that an injunction would have been denied under equipoise-style balancing, we choose to focus on a point of common ground with respect to both preliminary and permanent injunctions—namely, our view that injunctions should be denied when disproportionality, as we define it above, has been found.

¹⁸⁴ Gergen et al. 2012, 246 (contrasting “equipoise-style balancing” to the traditional question of whether a permanent injunction would inflict “undue hardship”).

b) Disproportionality Regardless of Whether Patentee’s Harm is Small or Great

Another potentially relevant consideration in the disproportionality analysis is the absolute, as opposed to relative, size of the patentee’s harm. Some Anglo-American cases have suggested that if the harm, or at least the noncompensable harm, to the plaintiff is substantial, an injunction should be granted even if its effect would be disproportionate.¹⁸⁵ That is, disproportionality is a ground for refusing an injunction only if the damages or noncompensable harm to the plaintiff is small. We **recommend** against any such limitation on the proportionality principle. Harm to a plaintiff from the lack of an injunction can be substantial yet nonetheless dwarfed by much greater negative effects to an adjudged infringer from issuance of the injunction, with the result that issuance of the injunction is contrary to both the specific purposes of patent law and the purposes of law more generally. We likewise **recommend** against an opposite approach that would deny an injunction unless harm to the patentee is substantial, regardless of disproportionality. Failure to vindicate patentees’ interests even in small-value cases can have a negative impact on operation of the patent system as a whole when such failure is aggregated across the full spectrum of small-value disputes.

6. Burdens of proof or production

A further consideration worth addressing is who, between the patent holder and the accused

¹⁸⁵See, e.g., *Shelfer v. City of London Elec. Lighting Co.* (Civ 1895) (UK).

or adjudged infringer, should bear the burden of proof on disproportionality and whether any facts, if proven, should give rise to a presumption of proportionality or disproportionality.

In all jurisdictions the patentee bears the burden of proving liability in order to obtain an injunction. In some jurisdictions this gives rise to a presumption that injunctive relief be granted. In other jurisdictions, the patentee bears a further burden to establish entitlement to injunctive relief. We take no position on this issue. Nonetheless, we acknowledge that an adjudged or accused infringer is likely to be in a better position than the patentee to produce evidence of the negative effects that it (and, depending upon the implementation, related third parties, and, through ripple effects, the general public) is likely to suffer from an injunction against infringement. Thus, we believe that it is reasonable for courts to place some burden of production with respect to such effects on the infringer. Otherwise, the patentee could be left to speculate about potential negative effects and then seek to prove their limited size or absence even when an adjudged or accused infringer would perceive little basis for alleging them.

As suggested above, we have, in general, not reached consensus on the extent to which there should be presumptions for or against injunctive relief after various showings have been made. On the other hand, while disproportionality may generally be more likely when patents are enforced against complex products, we do **recommend against** a general presumption of disproportionality in complex product cases. First, practically speaking, such a presumption might place undue pressure on the precise definition of what constitutes a “complex product.” Second, even in cases in which the claimed invention indisputably constitutes a minor component of a complex product, disproportionality is by no means inevitable. For example, a minor feature of an end product might be very cheap and easy to design around, so that the end product itself does not need to be kept off the market and redesign costs are small even if a court were to grant an

injunction.¹⁸⁶ Further, as discussed below, injunctions in complex product cases may be specifically tailored to avoid disproportionality even when an immediately effective injunction of generic scope, such as one forbidding any further manufacture, use, sale, or importation of an infringing product by an adjudged infringer, would have disproportionate effect.

C. Tailoring Injunctive Relief

As a corollary to our general recommendation on proportionality, we **recommend** that a proportionality-based test like the one described above be deployed in a system that gives courts latitude to construct injunctions that are tailored to avoid or mitigate disproportionate effects. In short, we do not envision a proportionality test that generally consists of a simple up-or-down vote on the appropriateness of a one-size-fits-all formulation of enjoined activities. Rather, we envision a process in which a court may consider the potential negative effects of an injunction *together with* ways in which those effects can be mitigated by tailoring injunctive relief. Put another way, tailoring should not necessarily be seen as a restriction on an injunction that would have been granted in any event; by mitigating the effects of an injunction, tailoring may enable an injunction to be granted when it would otherwise have been refused for disproportionality.

The two primary ways in which an injunction can be tailored to help ensure a proportionate effect are modifications to its scope or timing. For example, a court might stay an injunction or

¹⁸⁶See *HTC Corp. v. Nokia Corp.* (Pat 2013, ¶ 67) (UK) (“If non-infringing alternatives are available at non-prohibitive cost, however, then there is unlikely to be a problem of patent hold up. Accordingly, other things being equal, an injunction is unlikely to be disproportionate.”).

delay its effective date to allow time for an adjudged infringer to design around the patent.¹⁸⁷ Alternatively, a court might exclude already existing products from the scope of the injunction. This proposal has been made by some commentators,¹⁸⁸ and occasionally applied or at least considered by courts in the U.S., UK, and Canada.¹⁸⁹ In at least some jurisdictions, however,

¹⁸⁷ One possible objection to staying injunctive relief is concern that the possibility of such delay can discourage an accused or even adjudged infringer from acting reasonably to avoid future infringement or to prepare for such infringement avoidance until the date that an injunction issues. In *HTC Corp. v. Nokia Corp.* (Pat 2013) (UK), Arnold J refused to grant a stay on the basis that the infringer was aware of the likelihood of proceedings for over 18 months, and this was ample time for it to have made contingency plans. An argument against such an approach is that many asserted patents are invalid or not infringed, and requiring the alleged infringer to start redesign when it is first put on notice may allow the owner of a weak patent to extract an excessive royalty. We express no view on this issue, and recommend **further research**.

¹⁸⁸ See Lemley & Shapiro 2007a, 2037-38; Chien & Lemley 2012 (making a similar proposal in respect of the USITC); Golden 2012.

¹⁸⁹ See, e.g., *i4i Ltd. Partnership v. Microsoft Corp.* (Fed. Cir. 2010, p.861-62) (U.S.) (“In light of the record evidence, we conclude that the district court erred by ordering Microsoft to comply with the injunction within sixty days. The only evidence about how long it would take ... gave an estimate of ‘at least’ five months.”); *Cincinnati Car Co. v. New York Rapid Transit Corp.* (2d Cir. 1933) (U.S.) (recounting that earlier in the case “we suspended the injunction to allow the defendant to substitute another device[,] . . . [i]t did so, and when the new structure came before us, we held that it escaped the claims of the patent”); *Illinois Tool Works Inc. v. Autobars Co. (Servs.) Ltd.* (Ch 1974) (UK) (granting a three month stay to allow the infringer to launch a non-infringing product); *Virgin Atlantic v. Premium Aircraft* (Civ 2009) (UK) in which the Court of Appeal tailored the injunction by allowing the infringer to use the patented technology to fulfill an existing order, on the condition that the infringer would pay a substantial specified sum, that the infringer’s parent company would provide a guarantee, and that the infringer would give an undertaking that the infringing product would not be used in competition with the patentee: *id.* at ¶ 31, 33. The effective period of

tailoring along the lines we propose might require a substantial shift in judicial philosophy—though within the European Union some such movement may be possible in the years to come.¹⁹⁰

Tailoring generally, and a stay in particular, can be especially impactful in the context of complex products, where infringement of a patent covering a minor component of the end product might result in the entire product being held off the market during the period of redesign. Such a consequence might allow the patentee to force a license that extracts not just the value of the patented technology, but also the value of the entire product line over the period during which it would otherwise be held off the market.¹⁹¹ Consequently, we **recommend** that courts generally be willing to consider such tailoring whenever injunctive relief is sought in relation to a complex

the carve-out was approximately two months. *See also AbbVie Corp. v. Janssen Inc.* (Fed. Ct. 2014) (Can.) *set aside on other grounds AbbVie Corp. v. Janssen Inc.* (Fed. Ct. App. 2014) (Can.) (granting an injunction in relation to a pharmaceutical biologic, while allowing the infringer’s product to be sold to treat a subset of disorders for which the patentee’s product was ineffective).

¹⁹⁰ *See, e.g.*, sources cited *supra* note 46. *See also* BGH v. 10.5.2016 – X ZR 114/13 (Ger.) (stating that a court may grant an *Aufbrauchfrist*, or transition period, when “in consideration of the interests of the patent owner and the infringer, the immediate enforcement of the injunction would result in a disproportionate and undue hardship and thus would be in bad faith,” and citing academic literature recommending that courts should consider granting such a transition period on a case-by-case basis, taking into account all of the participants’ interests; the infringer’s good or bad faith; whether the patented invention formed just a small but functionally necessary component of a complex product; and whether an unpatented or licensed product could be substituted within a reasonable time). The German court describes these conditions as applying only under narrow conditions (*engen Voraussetzungen*), however, and denied such a transition period on the facts presented; and legislation might be necessary clearly to authorize courts to award interim royalties pending such a transition period.

¹⁹¹*See* Lemley & Shapiro 2007a, 2000.

product.

In fact, we **recommend** that courts should consider tailoring injunctions in the normal course, even when a proportionality-based test like that in our general recommendation is otherwise satisfied. While the argument for tailoring an injunction may be particularly strong when the injunction would otherwise be refused as having a disproportionate effect, we recommend against any requirement that tailoring be permitted only after disproportionate harm is shown.

D. Ongoing Royalty in Lieu of Injunctive Relief

When a permanent injunction is refused, U.S. courts routinely grant monetary compensation that is to be paid to the patentee by the infringer for post-judgment infringing uses of the patented invention.¹⁹² This compensation is known as an ongoing royalty. An ongoing royalty is awarded at the request of the patentee, who, in the absence of an injunction against further infringement, might otherwise be expected to bring a second lawsuit for infringement occurring after entry of final judgment in the initial lawsuit. The ongoing royalty may in principle be awarded as a lump sum, or on a per unit basis, calculated either as a fixed dollar amount or as a percentage of, for example, the sale price. Typically, the ongoing royalty is initially assessed on the basis of the same principles as reasonable royalty damages for past infringement (discussed in Chapter 1), but U.S. courts will often enhance that royalty on the view that any continuing

¹⁹²Because injunctions are almost always granted to a successful patentee in other jurisdictions, the question has so far arisen primarily in U.S. law. We are not aware of case law from other jurisdictions directly addressing this issue..

infringement is automatically willful.¹⁹³

We **recommend** that, at least when an injunction is refused on grounds of the disproportionality of negative effects on enjoined parties, the governing principles for ongoing royalties should generally be the same as those governing awards of past damages, without further enhancement.¹⁹⁴ When an injunction is denied on grounds of disproportionality to enjoined parties, the general implication is that the infringer has become effectively “locked into” a course of infringement from which it is difficult to extricate itself at a reasonable cost. Such “lock-in” might be properly considered to constitute extenuating circumstances for continued use of the patented invention. Further, such circumstances suggest that further-enhanced damages for continued infringement might themselves impose a disproportionate burden that the infringer will be unable to contract around.¹⁹⁵ It has been suggested that a modest increase in the ongoing (forward-looking) royalty rate may be needed if the royalty rate for past infringement would be inadequate to fully compensate the patentee.¹⁹⁶ This may be appropriate in cases where future uses of the

¹⁹³*See generally* Seaman 2015.

¹⁹⁴We take no position on whether an ongoing royalty should be enhanced, or even awarded, when injunctive relief is denied for other reasons, such as litigation misconduct, or undue delay (laches), as our focus is on problems of disproportionality which may arise in the context of complex product. Nor do we take any specific position on enhanced of ongoing royalties in unusual cases, such as where lost profit damages were awarded, but an injunction was denied nonetheless, except that in such cases the general governing principles we have articulated should remain applicable.

¹⁹⁵*See* Seaman 2015, 244.

¹⁹⁶*Id.* at 245-46.

patented technology are more economically valuable than past uses.¹⁹⁷ But the royalty rate should not be increased simply to compensate for the patentee's loss of bargaining power that occurs when an injunction is denied. If it is indeed desirable on the facts of the case to force the infringer to negotiate a license as opposed to paying an ongoing royalty, we anticipate that it will commonly be preferable to do so by granting an injunction, stayed or otherwise, that is appropriately tailored to minimize any disproportionality to those burdened by it.

We further **recommend** that when a permanent injunction is not granted on grounds of disproportionality, an ongoing royalty should normally be granted in lieu thereof.¹⁹⁸ Denying a sought-after ongoing royalty and forcing a patentee to relitigate a continuing course of infringement from scratch would threaten to unduly dilute the incentives that the patent system means to provide.¹⁹⁹ Failure to award an ongoing royalty might also leave an adjudged infringer in a situation of uncertainty about its potential future liability.

We do not rule out the possibility that an ongoing royalty might be denied in some

¹⁹⁷This is consistent with our recommendation in Chapter 1 that the assessment of a reasonable royalty should use all information available at the time of trial, including ex post information: *see* Chapter 1.

¹⁹⁸ One exception to this general recommendation arises in cases in which damages awarded already represent a lump sum, fully paid license for both past and future use of the patented technology. However, we take no position on whether the courts should award a lump sum for both past and future use of the patented technology in circumstances in which the parties would have done so: *see* Siebrasse & Cotter 2016, 978-88 (arguing that a court should not attempt to replicate a lump sum that similarly situated parties would have agreed to in a hypothetical negotiation because an award of damages ex post cannot functionally replicate an actual lump sum received ex ante.)

¹⁹⁹Seaman 2015, 219.

circumstances in which an injunction has been refused on grounds of disproportionality. However, we note that, even the fact that a patented technology is important to the public interest, as for example in the case of life-saving drugs or devices, does not provide generally sufficient grounds for refusing an ongoing royalty, just as it does not provide generally sufficient grounds for refusing past damages for infringement. General refusal to award ongoing royalties for important inventions would arguably undermine the patent incentive where it is needed most.

While we recommend against routine enhancement of ongoing royalties solely on the basis of the willfulness of the ongoing infringement, as just discussed, we do not rule out the possibility that ongoing royalties might be enhanced in exceptional circumstances, based on relevant equitable considerations, such as those discussed in Chapter 3 on Enhanced Damages.

Finally, we **recommend** that the assessment of an ongoing royalty take into account all information available at the time of trial, as well as any reasonably foreseeable changes to market demand or structure that might affect the royalty. This is consistent with our recommendation in Chapter 1 that the hypothetical negotiation used to assess a reasonable royalty for past infringement should take place with the benefit of ex post information. If that recommendation regarding reasonable royalties is followed, there will be no difference between the award for reasonable royalties and an ongoing royalty. If courts ignore ex post information in assessing reasonable royalty damages, we are nonetheless of the view that they should take such information into account in assessing an ongoing royalty, in which a divergence between the two rates would occur. Further, to the extent an ongoing royalty is paid out on a continuing basis, rather than in a lump sum, there might be grounds, under some circumstances, for a court to revisit the ongoing-royalty order on grounds that later developments have made it manifestly inappropriate.

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