United States Court of Appeals for the Federal Circuit

No. 2012-1548

APPLE INC. AND NEXT SOFTWARE, INC.,

Appellants,

v.

MOTOROLA MOBILITY, LLC AND MOTOROLA SOLUTIONS, INC.,

Cross-Appellants.

On Appeal from the United States District Court for the
Northern District of Illinois in Case No. 11-cv-08650, Judge Richard Posner

BRIEF OF VERIZON COMMUNICATIONS INC., AMERICAN ASSOCIATION OF ADVERTISING AGENCIES, AND FORD MOTOR COMPANY AS *AMICI CURIAE* IN SUPPORT OF NEITHER PARTY

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December 4, 2012

FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Apple Inc. v. Motorola Mobility, LLC

No. 2012-1548

CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party) Amicus Verizon Communications Inc. certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

Verizon Communications Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

Verizon Communications Inc.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None

4. ☑ The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Bancroft PLLC: Paul D. Clement; D. Zachary Hudson

12/4/2012
Date

/s/Paul D. Clement
Signature of counsel

Paul D. Clement
Printed name of counsel

Please Note: All questions must be answered
cc: All Counsel

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1. The full name of every party or amicus represented by me is:

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Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party) Amicus Ford Motor Company certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

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Bancroft PLLC: Paul D. Clement; D. Zachary Hudson

12/4/2012
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Please Note: All questions must be answered
cc: All Counsel

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STATEMENT OF INTEREST OF AMICI CURIAE[1]

This brief supports neither party. Amici curiae have important business relationships with both parties to this case and take no position on the underlying merits of their patent dispute. Nonetheless, because Judge Posner's opinion speaks to profoundly important issues, amici file this brief to address the critical questions of when injunctive relief is warranted as a remedy for infringement and how to properly calculate reasonable royalty damages.

Verizon is a leading provider of high technology products and services, and its business depends on systems and devices that incorporate a large number of components and perform a variety of functions. In that capacity, Verizon must frequently defend against baseless allegations of patent infringement. Verizon also owns a large patent portfolio, reflecting its role as a leading innovator in the communications field.

The American Association of Advertising Agencies is the national trade association of the advertising agency business. The 1,196 member agency offices it serves in the U.S. employ 65,000 people, offer a wide range of marketing communications services, and place 80 percent of all national advertising. The

[1] Pursuant to Federal Rule of Appellate Procedure 29(c)(5), counsel for amici curiae represent that no counsel for a party authored this brief in whole or in part and that no person or entity, other than amici or their counsel, made a monetary contribution to the preparation or submission of this brief.

management-oriented association helps its members build their businesses, and acts as the industry's spokesman with government, media, and the public sector.

Ford Motor Company assembles and distributes motor vehicles worldwide. Founded in 1903, Ford grew from a small enterprise into one of the world's largest corporations due in great part to innovations like the Model T and the moving assembly line. Ford's innovations have resulted in the issuance of thousands of patents, many of which in turn have laid the foundation for future developments.

Amici have a strong interest in a balanced system of patent remedies that discourages infringement and protects legitimate property rights while avoiding the harmful effects of over-deterrence that threaten innovation and the public interest.

SUMMARY OF ARGUMENT

In order for the patent system to foster innovation and avoid distorting competition, it must employ remedies that replicate the reward the patentee would have earned absent infringement. Making injunctive relief available in suits involving RAND-encumbered standards-essential patents and patents that read on only a minor component in a multi-component device does far more. It allows patentees to capture more than the economic value of their patents—they are able to obtain the costs of after-the-fact switching (if switching is indeed an option) to noninfringing alternatives. By the same token, awarding reasonable royalty damages in an amount exceeding the value of the patented technology over alternatives *at the time of design* allows patentees to obtain profits in excess of the economic value of their inventive contribution. That overcompensation injures competition, threatens innovation, and is fundamentally inconsistent with the patent bargain.

In amici's view, Judge Posner correctly concluded that injunctive relief should be unavailable when the patent in suit is RAND-encumbered. In the same vein, Judge Posner's submission that injunctive relief should not be awarded when the patent at issue reads on only a minor component in a multi-component device is well-grounded in traditional equitable principles and sound economic methodology. Furthermore, as Judge Posner suggests, the correct measure of reasonable royalty damages is constrained by the value of the patented technology over alternatives at the time of the design decision.

ARGUMENT

I. Injunctive Relief Is Inappropriate For RAND-Encumbered Standards-Essential Patents.

Judge Posner correctly concluded that when a patentee agrees to license its standard-essential patent on "reasonable and nondiscriminatory" (RAND) terms, injunctive relief is inappropriate. *See Apple, Inc. v. Motorola, Inc.*, 2012 WL

2376664, at *12 (N.D. Ill. June 22, 2012) ("Op.").[2] Enjoining a defendant's use of such patents undermines the continued functioning of standard-setting organizations (SSOs) that play a critical role in the modern economy and threatens market efficiency and innovation.

SSOs are integral to the development of technical interoperability standards. Without these standards, it would be difficult to provide many of the services vital to the modern U.S. economy, such as the Internet, wireless broadband, and components that use Universal Serial Bus (USB) technology. *See* Mark A. Lemley, *Intellectual Prop. Rights and Standard Setting-Orgs.*, 90 Cal. L. Rev. 1889, 1892-93 (2002). The Executive Branch and Congress have both overtly recognized the value of standards and the benefits they create: "Standards can make products less costly for firms to produce and more valuable to consumers." U.S. Dep't of Justice & Fed. Trade Comm'n, *Antitrust Enforcement and Intellectual Prop. Rights: Promoting Innovation and Competition* 33 (2007) ("2007 IP Report").

While standard setting processes are incredibly valuable, they also create significant risks for abuse that can be exacerbated when the holder of a RAND-encumbered standard-essential patent is able to obtain an injunction. Once an

[2] Amici use "standard-essential patent" to mean a broadly practiced patent that is claimed to be essential to a widely implemented standard.

agreed-upon industry standard gains widespread implementation, the owner of a RAND-encumbered standard-essential patent is in a position to demand royalties far in excess of the true, standalone value of that patent. Specifically, the owner is able to take advantage of the fact that companies have made specific sunk investments and now face high switching costs to demand higher royalties than could have been obtained before the adoption of the particular technology and the implementation of the standard. *See, e.g.*, Joseph Farrell, et al., *Standard Setting, Patents, and Hold-Up*, 74 Antitrust L.J. 603 (2007).

In light of the significant hold-up power that patentees acquire once a standard is implemented, the intellectual property rights policies that SSOs create usually require participants in standards development to agree to issue licenses to standards-essential patents on RAND terms to any party who seeks a license. "The purpose of the []RAND requirements . . . is to confine the patentee's royalty demand to the value conferred by the patent itself as distinct from the additional value—the hold-up value—conferred by the patent's being designated as standard-essential." Op. *11.

Allowing the holder of a RAND-encumbered standard-essential patent to obtain an injunction when that patent is infringed short circuits the holder's RAND obligation and gives judicial sanction for a patentee to extract the hold-up value that RAND licensing commitments are intended to eliminate. Rather than charge a licensing fee or royalty that reflects the ex ante value of the patented technology over the alternatives available when the SSO was making its design decisions, a RAND-encumbered standard-essential patent holder can, ex post, seek an excessive royalty unchecked by competition, using the injunction as leverage. Accordingly, the benefits associated with standard setting—product interoperability, increased innovation, elevated efficiency, and broader consumer choice—are all threatened by granting injunctions in the RAND context.

A rule that injunctive relief is unavailable for a RAND-encumbered standard-essential patent is compelled by a straightforward application of the factors enumerated in the Supreme Court's unanimous decision in *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006). First, there is no real threat of irreparable harm to the patentee in the absence of an injunction—it has already agreed to make the patent available in exchange for a RAND royalty. That agreement is an open invitation to anyone who is willing to pay a RAND royalty to practice the patent. *See* Fed. Trade Comm'n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 235 (2011) ("2011 IP Report") ("A prior RAND commitment can provide strong evidence that denial of the injunction . . . will not irreparably harm the patentee.").

Second, that a standard-essential patent is RAND-encumbered is clear evidence that damages at law will be adequate to compensate for any injury suffered by the patentee. "By committing to license its patents on []RAND terms," a patentee commits to licensing the patent "to anyone willing to pay a []RAND royalty and thus implicitly acknowledge[s] that a royalty is adequate compensation for a license to use that patent." Op. *12. "[A]gree[ing] to license its standards-essential patents on []RAND terms [i]s a *quid pro quo* for their being declared essential to the standard." *Id.* Entities that agree to license their standards-essential patents on RAND terms are simply not in a position to argue belatedly that a damages remedy is inadequate. *Cf. Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008) ("the fact that a patentee has previously chosen to license the patent may indicate that a reasonable royalty does compensate for an infringement"); *Polymer Techs., Inc. v. Bridwell*, 103 F.3d 970, 974 (Fed. Cir. 1996) (same).

Third, the balance of hardships in an infringement suit involving a RAND-encumbered standard-essential patent cuts in favor of the defendant. In its most direct form, the effect of an injunction is obvious: the firm may no longer be able to participate in the market for the good in which the patent at issue is essential. "Design around, at any cost, may not be an option." 2011 IP Report 234; *see* 2007 IP Report 34-40. This possibility alone counsels against granting an injunction for the infringement of RAND-encumbered standards-essential patents. Moreover, when components implementing RAND-encumbered standards-essential patents are involved, firms will often have massive complementary investments at stake that are also put at risk. If, on the other hand, a court orders damages in the form of a reasonable royalty to the patentee, that patentee gets exactly what it bargained for when it agreed to license the patent on RAND terms in the first place.

Finally, the public interest will almost always weigh against issuing an injunction when an infringed standard-essential patent is RAND-encumbered. Because of the product interoperability that standards enable, the impact of an injunction enforcing a RAND-encumbered standard-essential patent will frequently be felt beyond the firm that is subject to the order. "Once a particular technology is chosen and the standard is developed . . . it can be extremely expensive or even impossible to substitute one technology for another." Letter from Thomas O. Barnett, Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., to Robert A. Skitol, Esq. 8 (Oct. 30, 2006). In effect, therefore, an injunction against one implementer can have the effect of an injunction against an entire industry. The broader impact throughout the economy of an injunction in this context clearly tips the public interest calculus against an injunction.

A review of the principles informing whether injunctive relief is warranted when real property is involved further underscores that such relief should be unavailable in the RAND context. Courts have refused plaintiffs' requests for equitable relief in all areas of property law where the result of an injunction would be the imposition of unnecessary and massive costs. *See, e.g.*, *City of Harrisonville v. W.S. Dickey Clay Mfg.*, 289 U.S. 334, 338-39 (1933) (reversing the grant of an injunction because it would have forced defendant either to abandon its $60,000 sewage disposal plant or build an auxiliary plant for $25,000, where the plaintiff suffered only a "financial" loss "many times" less); Restatement of Property § 563 (1944) ("Injunctive relief against violation of the obligation arising out of a promise respecting the use of land will be denied if the harm done by granting the injunction will be disproportionate to the benefit secured thereby."). And consideration of the public interest has led courts to deny injunctive relief in all manner of property cases, including those involving "nuisance, encroachment, and violation of zoning laws." Alyson G. Barker, *Patent Permanent Injunctions and the Extortion Problem: The Real Prop. Analogy's Pres. of Principles of Equity*, 88 J. Pat. & Trademark Off. Soc'y 256, 259 (2006).

Those in favor of allowing injunctive relief when a RAND-encumbered standard-essential patent is infringed contend that the threat of such relief is necessary to ensure that a "reasonable" royalty can be negotiated. That position, however, ignores reality. Potential licensees have ample incentive to enter into licensing agreements on reasonable terms to avoid uncertainty in business planning and litigation costs. Those costs are significant: the average patent trial costs $6.25 million, and a finding of infringement can result in tens of millions of dollars in damages. *See* Am. Intellectual Prop. Law Ass'n, *Report of the Econ. Survey* (2009). And after all that, there is no guarantee that a court will decide on a royalty lower than that originally offered by the patentee. If a potential licensee refuses a RAND-encumbered patentee's offered "reasonable" rate, it runs "the risk of being ordered by a court to pay an equal or even higher royalty rate," Op. *12, "based on a patent known to be valid and infringed," 2011 IP Report 235 n.94.

What is more, damages are not deemed "an inadequate remedy just because, unless backed by a threat of injunction, [they] may induce a settlement for less than the damages rightly sought . . . ." Op. *13. Indeed, while the threat of an injunction may lead to an agreed-upon royalty, it almost certainly will drive the agreed-upon amount away from what is "reasonable" and toward an amount that unreasonably includes a hold-up premium. For that reason, in other areas of the law, if the parties cannot agree, courts assess a reasonable royalty without the distorting effect of a threatened injunction. "You can't obtain an injunction for a simple breach of contract on the ground that you need the injunction to pressure the defendant to settle your damages claim on terms more advantageous to you than if there were no such pressure." *Id*.

II. Injunctive Relief Is Inappropriate When The Patent At Issue Covers Only A Minor Component In A Multi-Component Device.

Judge Posner's opinion also correctly suggests that injunctive relief is unwarranted where only "minor features in [a] complex device[]" are infringed. *Id.* at *16. While an injunction may make sense in the paradigmatic case where the patent is the product, that is not the case when a patent covers only a minor feature in a complex, multi-component device.

This Court recently recognized as much in *Apple, Inc. v. Samsung Electronics Co.*, No. 2012-1507 (Fed. Cir. Oct. 11, 2012) ("*Samsung*"). In *Samsung*, the Court stated that "where the accused product includes many features of which only one (or a small minority) infringe," the patentee must establish that there is "a sufficiently strong causal nexus [between] the alleged harm [and] the alleged infringement" to obtain injunctive relief. *Samsung*, slip op. at 6. In other words, when "the accused product would sell almost as well without incorporating the patented feature[,] . . . . even if the competitive injury that results from selling the accused device is substantial, the harm that flows from the accused infringement (the only harm that should count) is not," and injunctive relief is inappropriate. *Id.* at 7. The Court made clear that the "causal nexus requirement is not satisfied simply because removing an allegedly infringing component would leave a particular feature, application, or device less valued or inoperable." *Id.* at 10. And "[i]t is not enough for the patentee to establish some insubstantial connection between the alleged harm and the infringement," such as "that an application may sell in part because it incorporates a [patented] feature," and "check the causal nexus requirement off the list." *Id.* at 8, 11. "The patentee must . . . show that the infringing feature drives consumer demand for the accused product." *Id.* at 8; *see Apple, Inc. v. Samsung Electronics Co.*, 678 F.3d 1314, 1324 (Fed. Cir. 2012) ("Sales lost to an infringing product cannot irreparably harm a patentee if consumers buy that product for reasons other than the patented feature.").[3]

Allowing patentees to obtain injunctions when there is an insufficient causal nexus between the harm suffered and the alleged infringement—as will almost always be the case in a suit involving only a minor feature in a multi-component device—permits the patentee "to leverage its patent for competitive gain beyond that which the inventive contribution and value of the patent warrant." *Samsung*, slip op. at 7. Where the patent in suit reads on only a minor component in a multi-component device, the mere threat of an injunction can force a defendant to pay exorbitant royalties significantly greater than the value of the patented technology over alternatives at the time of the design decision, *i.e.*, well in excess of the fee

[3] That the *Samsung* opinion addressed a preliminary—as opposed to a permanent—injunction is of little moment: "[t]he standard for a preliminary injunction is essentially the same as for a permanent injunction with the exception that the plaintiff must show a likelihood of success on the merits rather than actual success." *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 546 n.12 (1987).

that would have been negotiated ex ante in the competitive market. "[T]he patentee can use the threat of an injunction to obtain royalties covering not only the market value of the patented invention, but also a portion of the costs that the infringer would incur if it were enjoined and had to switch." 2011 IP Report at 5; *see eBay*, 547 U.S. at 396 (Kennedy, J., concurring) ("an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees"). In recognition of this problem, and consistent with the views espoused in Judge Posner's opinion and in *Samsung*, the FTC has concluded that it may be appropriate to deny injunctive relief when "the patented technology is a minor component of a complex product," and the act of infringement—as opposed to competition more generally—does not harm the patentee. 2011 IP Report at 227-28.

A review of the *eBay* factors reinforces the conclusions of Judge Posner, this Court, and the FTC. First, when the patented component is only a minor part of the overall product, it is hard to see what irreparable harm is actually suffered by the patentee. The market for the patented component and the market for the multi-component device allegedly infringing that single component are not the same. Indeed, while a patentee may be harmed by the competition the defendant creates in the market for the multi-component device, that "is a separate harm—and a perfectly legal one—from any harm caused by patent infringement." Op. *19; *see* 2011 IP Report 230.

Second, the harm caused by infringement in these circumstances is easily redressed by monetary damages in the form of a reasonable royalty. One of the "basic principle[s]" of injunctive relief is that such "relief is available only when the remedy at law is inadequate—that is, only when damages would not provide complete relief." Op. *21; *cf. Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982) ("An injunction should issue only where the intervention of a court of equity 'is essential in order effectually to protect property rights against injuries otherwise irremediable.'" (quoting *Cavanaugh v. Looney*, 248 U.S. 453, 456 (1919))). And in this context, as in the RAND context, a reasonable "royalty, combined with the damages remedy for past sales [if appropriate], should provide full compensation to the patentee, thus obviating injunctive relief." Op. *21.

Third, the balance of hardships clearly favors the defendant when the patented technology is a minor component of a complex product and the harm to the patentee is limited to the defendant's failure to pay a licensing fee. Granting injunctive relief under such circumstances "impose[s] costs on the alleged infringer disproportionate both to the benefits to it of having infringed and to the harm to the victim of infringement," resulting in "a windfall to the patentee and a form of punitive rather than compensatory damages imposed on the infringer." Op. *16;

see 2011 IP Report at 231 (the balance of hardships "tip[s] toward the infringer when the invention is a component of a downstream product accounting for a relatively small portion of the product's value"). In some cases, the defendant may even have to take the relevant product (or products) off the market. *See* Op. *16.[4]

Finally, the public interest strongly weighs against issuing an injunction when the patented technology is a minor component of a complex product. Justice Kennedy reached this conclusion in *eBay*, stating that "when the patented invention is but a small component of the product the companies seek to produce . . . an injunction may not serve the public interest." 547 U.S. at 396-97. The enjoined firm may be forced to take the infringing product off the market, and incur the substantial switching costs associated with swapping out the infringing component for a noninfringing component. As a result, innovation slows and the public interest suffers. And even if the only impact of the injunction is that the defendant must pay an excessive licensing fee, the public interest is still harmed. The price of the product utilizing the patented technology may increase and consumer welfare is diminished accordingly. *See* 2011 IP Report at 5.

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[4] That the balance of hardships favors the defendant under these circumstances is underscored by the difficulty of navigating the patent thicket. It is often economically infeasible—if not impossible—for a defendant to identify and attempt to license all of the patents that may read on its products, particularly in high-tech industries. *See, e.g.*, Michael Heller, The Gridlock Economy 100 (2008).

The limited availability of equitable relief for minor encroachments of real property reinforces the conclusion that such relief should be unavailable when a patent reading on a minor component of a multi-component device is infringed. For example, when a "defendant has built a substantial structure such as a house or a factory in such a way that a part of it is on the plaintiff's land—eaves overhang slightly . . . or the structure is actually built in part on the surface of plaintiff's land"—injunctive relief is often inappropriate because the actual harm to the plaintiff is small and "the encroachment can be removed only by destroying a part of the defendant's large building." Dan B. Dobbs, Dobbs Law of Remedies § 5.10(4) at 815-16. In these circumstances, an injunction would result in "economic waste or else put the plaintiff in position to demand an unconscionably high price to let the building stay in place." *Id.* at 816; *see, e.g.*, *Kratze v. Indep. Order of Oddfellows*, 500 N.W.2d 115, 118, 148 (Mich. 1993) (where building encroached by 1.2 feet, order "to remove the encroachment was not consistent with justice and equity and should be vacated"). And "[i]f the injunction were granted the defendant would probably make overtures for purchase of the space in which he is trespassing . . ., and his bargaining position would be so bad that the plaintiff might extract a large sum from him," making "the court a party to extortion." Restatement (Second) of Torts § 941 cmt. c (1979). So it is here. Permitting injunctive relief when a patent reading on a minor component in a complex device is allegedly infringed results in "economic waste"—the whole product is taken off the market because of the infringement of the minor component—and the patentee is in a "position to demand an unconscionably high price" for the component's use.

III. Reasonable Royalty Damages Should Not Exceed The Value Of The Patented Technology Over Alternatives At The Time Of Design.

Judge Posner concluded that when lost profits are not at issue, the appropriate measure of damages depends on "the infringer's cost savings from practicing the patented invention without authorization." Op. *7; *see Apple, Inc. v. Motorola, Inc.*, 2012 WL 1959560, at *11 (N.D. Ill. May 22, 2012) ("May 22 Order") (the differential benefit between using the patented technology and the next-best alternative is the "fruit of infringement" and "the proper basis for computing a reasonable royalty"); *id.* at *9 (a reasonable royalty should be based on the "lowest cost to duplicate the patent's functionality without infringement"). "The premise of" this measure—"the value of the infringement to the infringer"—"is that had the infringer negotiated for a license rather than infringing, that value would have been transmuted into a license fee paid to the patentee, and the loss of that fee constitutes damages suffered by the patentee." Op. *14. Accordingly, the patentee is entitled to no more than what the defendant would have paid the patentee to practice the patent: the value of the patented technology over the alternative at the time the design decision was made.

Pursuant to 35 U.S.C. § 284, a patentee is entitled to "reasonable royalty" damages "adequate to compensate for the infringement." As Judge Posner observed, "[d]amages are designed to place the patentee in the position it would have occupied had the patent not been infringed." Op. *17. This is not a new observation. More than 150 years ago, the Supreme Court recognized that "the measure of damages" for patent infringement requires a consideration of "the utility and advantage of the invention over the old modes or devices that [have] been used for working out similar results." *Suffolk Co. v. Hayden*, 70 U.S. (3 Wall.) 315, 320 (1865); *see Garretson v. Clark*, 111 U.S. 120, 121 (1884) ("the patentee must show in what particulars his improvement has added to the usefulness of the machine or contrivance," and "separate its results distinctly from those of the other parts, so that the benefits derived from it may be distinctly seen and appreciated").

Holding that reasonable royalty damages under § 284 can be no greater than the value of the patented technology over the alternative at the time of design is consistent with this longstanding precedent, reflects industry realities, and respects the patent bargain. Before adopting a technology, the only price that the defendant would be willing to pay is that equivalent to the value of the patented technology over alternatives. *See* May 22 Order *7 (the lowest cost of avoiding infringement "will be the ceiling on [a defendant's] willingness to pay for a patent license"). If the cost of implementing the technology exceeds its value over alternatives, the defendant will select the alternative—after all, a firm "almost invariably has another option at the time of its design decision, which it would choose if a patentee's royalty demand was excessive," 2011 IP Report at 185-86—or will simply drop the product or service feature made possible by the patented technology altogether.

Thus the marginal value that a patented technology provides over alternatives constrains the reasonable royalty available. *See* Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. Corp. L. 1151, 1183 (2009) ("Logically, [the value of the patent to the user] should equate to the marginal value of the technology, that is, to the user's expected increase in profit (or decrease in cost) from the use of that technology in comparison with the next-best available alternative."). The FTC agrees and has concluded that "the maximum royalty cannot exceed the increased profits the infringer anticipates based on using the patented invention rather than the next best alternative." 2011 IP Report at 185.

Though this Court has not expressly adopted the view of reasonable royalty damages mandated by Supreme Court precedent, approved by Judge Posner, and endorsed by the FTC, the Court has frequently characterized the damages inquiry in a manner consistent with that view. For example, in *Grain Processing Corp. v.*

American Maize-Products, 185 F.3d 1341, 1351 (Fed. Cir. 1999), this Court stated that "only by comparing the patented invention to its next-best available alternative(s)—regardless of whether the alternative(s) were actually produced and sold during the infringement—can the court discern the market value of the patent owner's exclusive right." Similarly, in *ResQNet.com, Inc. v. Lansa, Inc.*, this Court emphasized that a proper damages calculation must "associate [the] proposed royalty with the value of the patented method," and that damages evidence "unrelated to the claimed invention does not support compensation for infringement" at all, "but punishes beyond the reach of the statute." 594 F.3d 860, 869 (Fed. Cir. 2010) (quotation omitted). And in *Riles v. Shell Exploration & Production Co.*, 298 F.3d 1302, 1312 (Fed. Cir. 2002), the Court concluded that "[t]he economic relationship between the patented method and non-infringing alternative methods, of necessity, would limit" any reasonable royalty awarded.[5]

[5] To be sure, this Court's opinion in *Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359, 1373 (Fed. Cir. 2008), stated in dicta that the "claim that reasonable royalty damages are capped at the cost of implementing the cheapest available, acceptable, noninfringing alternative" was "wrong." That language, however, should not be read as rejecting a reasonable royalty damages test that focuses on the value of the patented technology over alternatives at the time of the design decision. First, that reading of *Mars* would place it in significant tension with this Court's opinions in *Grain Processing*, *ResQNet.com*, and *Riles.* Second, *Mars* speaks to the *cost* of an alternative and not the patented technology's *value* over alternatives, which may turn on considerations other than the "cost of implementing the cheapest available, acceptable, noninfringing alternative," such as the profit attributable to the use of the patented technology as compared to the next best alternative.

The rule that reasonable royalty damages should be constrained by the value of the patented technology over alternatives at the time of design is consistent with other damages paradigms applied in the reasonable royalty context. For example, the "entire market value" approach to calculating a reasonable royalty applies when the patented technology is "the basis for consumer demand" for the product of which the patented technology is a part. *Rite-Hite Corp. v. Kelley Co. Inc.*, 56 F.3d 1538, 1572 (Fed. Cir. 1995) (en banc); *see Imonex Servs, Inc. v. W.H. Munzprufer Dietmar Trennar GMBH*, 408 F.3d 1374, 1379 (Fed. Cir. 2005). In that situation, which is far from typical in the modern world of multi-patent/multi-component devices, the ultimate royalty rate deemed appropriate multiplied by the profit from the product utilizing the patented technology determines the royalty. This is really just a roundabout (and oftentimes unnecessarily complicated) way of getting at the value of the patented technology over its alternative. If the patented technology is so valuable that the product would not sell without it, then the patented technology's value over alternatives is likely high, resulting in a correspondingly high reasonable royalty. If, on the other hand, the invention provides only a marginal benefit over available alternatives and contributes little to the market demand for the product, then the patented technology's value over alternatives is likely low, resulting in a correspondingly low reasonable royalty.

Moreover, while this Court recently made clear in *Whitserve, LLC v. Computer Packages, Inc.*, 2012 WL 3573845, at *31 (Fed. Cir. Aug. 7, 2012), that it is not necessary to "use any or all of the *Georgia-Pacific* factors" when assessing "damages in patent cases," calculating reasonable royalties based on the patented technology's value over alternatives at the time of design is in not in conflict with those factors. *Georgia-Pacific* posits a hypothetical negotiation between the licensor and the licensee and asks what the parties would have agreed on as a licensing fee. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified by* 446 F.2d 295 (1971). Had the parties negotiated when the licensee could have easily turned to available alternatives to the patented technology, the negotiations would have led to a royalty that represents the value of the patent over alternatives, discounted by the parties' relative bargaining power. That is what the "reasonable royalty" of § 284 properly awards.

But while a focus on the value of the patented technology over alternatives at the time of design is consistent with the entire market value rule and the unwieldy *Georgia-Pacific* factors, it is a far better test because it isolates the relevant inquiry and thus is less distracting to juries and should ultimately produce more just remedial outcomes. As this Court recently noted in *LaserDynamics v. Quanta Computer, Inc.*, No. 2011-1440, slip op. at 25 (Fed. Cir. Aug. 30, 2012), admission of "overall revenues, which have no demonstrated correlation to the value of the patented feature alone, only serve to make a patentee's proffered damages amount appear modest by comparison, and to artificially inflate the jury's damages calculation beyond that which is 'adequate to compensate for the infringement.'" *See Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011) (the evidence presented as part of an entire market value theory "cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component" to the revenue generated by the product). Along the same lines, the haphazard application of the *Georgia-Pacific* factors has led to excessive and unpredictable damage awards that are often impenetrable on appellate review. *See, e.g.*, Daralyn J. Durie & Mark A. Lemley, *A Structured Approach to Calculating Reasonable Royalties*, 14 Lewis & Clark L. Rev. 627, 632 (2010) ("the fifteen-factor test makes it extremely difficult for judges to review a jury damage award"); Cotter, *Patent Holdup*,, 34 J. Corp. L. at 1185 n.163 (collecting recent cases demonstrating that "reasonable royalty awards may exceed the amount the parties would have agreed to, and indeed, may exceed the defendant's entire expected profit from the use of the patent," which "make[s] no economic sense."). And the situation is even worse when the entire market value rule and *Georgia-Pacific* factors are applied in tandem: "jurors are presented with the fifteen 'Georgia-Pacific' factors and some version of the 'entire market value'" and left to their own devices. S. Rep. No. 110-259 at 11-12 (2008).

Focusing the calculation of reasonable royalty damages on alternatives to the patented technology at the time of design avoids these pitfalls. The inquiry neither distracts the jury with large but irrelevant numbers nor requires an intricate consideration of rate and base like the entire market value rule. And it does not inundate the jury with evidence pertaining to fifteen factors—many (or all) of which may not be of any use in ascertaining the appropriate reasonable royalty in a given case—in a manner that complicates appellate review. What is more, calculating reasonable royalty damages based on the value of the patented technology over alternatives at the time of design need not be overly complicated. "For example, if the patented feature enhances the value of the product to consumers by $1 over the next best alternative" available at the time of design, then the per-unit damages for infringement are no greater than $1. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991, 1996 (2007). Similarly, if the patented technology "reduces the cost of manufacturing the good by $1" as compared to the next best alternative available at the time of design, then the per-unit damages for infringement are no greater than $1. *Id.*

Patentees have ample resources at their disposal to establish what constitutes a reasonable royalty under a value-over-alternatives regime. For example, if a patent covers a system, the value of the improved system could be compared to the value of the unimproved system, or to the value of a system that gets the improved function in some other, non-infringing way—whichever is better. The difference would cap the reasonable royalty award.[6] Along the same lines, a "properly designed and executed" survey of the sort that would have been used "outside the litigation context to determine the relative values to" consumers of the patented technology and alternatives could be instructive. May 22 Order at *4-*7. Such a survey could "isolate the value to consumers" of the patented technology by demonstrating "[h]ow much lower . . . the price of [the product would] have to be to compensate" for the lack of the patented technology. *Id.* at *5-*10. Evidence of the defendant's licensing arrangements regarding the patented technology may also be of use if they reflect the value of the patented technology over the alternative. That is not always the case. A license may reflect the size of litigation costs, not the value of the patent. Similarly, if the license issued after the patentee accused

[6] As a practical matter, it is best to use in this analysis the smallest unit that includes the patented technology at the point of novelty. For example, if the accused product is a router but the accused functionality resides in a line card slotted into the router, then an appropriate unit would be the line card. Similarly, if the accused functionality resides on a chip in the card, an appropriate unit would be that chip. *Cf. LaserDynamics*, slip op. at 38-40. It should not matter whether or how such a unit was actually sold or bought in the marketplace.

the defendant of infringement, it may reflect the patent's hold-up value and thus be of little use in determining a reasonable royalty.

Lest there be any doubt, the temporal component of the value-over-alternatives test is of great importance. Judge Posner recognized that the "when" matters—anchoring the damages analysis to the correct point in time allows for an accurate "measure of the value of the patent qua patent." Op. *11. Drawing on language that frequently appears in this Court's opinions, however, Judge Posner stated that the time for assessing the reasonable royalty is "the time of first infringement." *Id*. at *17. That is correct, but only in so much as the "time of first infringement" is understood to be the time that the decision to use the patented technology was made.

The aim of reasonable royalty damages analysis is "to recreate the *ex ante* licensing negotiation scenario"—the negotiation that "willing parties" would have engaged in "if infringement had not occurred." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1325 (Fed. Cir. 2009), *cert. denied*, 130 S. Ct. 3324 (2010). That is the justification for setting the negotiation at the point in time "just before infringement began." *Id*. at 1324; *see also Kelley*, 56 F.3d at 1554 (describing the negotiation as occurring "at the time infringement began"). If the relevant ex ante negotiation takes place just before the defendant's design decision is made, then the patentee will be able to bargain for a fee that reflects the value of the patented technology over alternatives. If, however, the negotiation is deemed to occur after that design decision has already been made—for instance, when the product has hit the market—sunk costs have already been incurred and the economics of the negotiation are severely distorted. At that point in time, a defendant would likely license the patent at any price below the switching costs associated with shifting to an alternative technology. That price is often greater than the equivalent of the ex ante value of the patented technology and well above the appropriate reward for the patentee's inventive contribution. Accordingly, the time "just before infringement began" must mean "just before the activity eventually deemed infringing began, or the time the design decision was made." [7] Otherwise, the reasonable royalty awarded "improperly reflects the economic value of investments by the" defendant rather "than the economic value of the invention." 2011 IP Report 190.

In addition to his views on how reasonable royalty damages should be assessed, Judge Posner correctly recognized that the patentee has the burden of establishing the alternative to its technology, as well as that alternative's value. *See* Op. *2 (expert "did not identify the [alternative] chip, let alone price it").

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[7] This Court has concluded that early stage product development, such as making design decisions, can create infringement liability. *See Soitec, S.A. v. Silicon Genesis Corp.*, 81 Fed. App'x 734, 737 (Fed. Cir. 2003) ("infringement during the early stages of process development is nonetheless a violation of patent law").

Showing simply that an alternative exists is "not enough to establish damages." *Id.*; *see id.* at *3 (rejecting the argument that all the patentee need show is "that there is one chip, however costly, somewhere in the world of computer hardware, that" could serve as a substitute); *cf. LaserDynamics*, slip op. at 47 ("When relying on licenses to prove a reasonable royalty, alleging a loose or vague comparability between different technologies or licenses does not suffice."). The patentee must identify the alternative, establish its value, and demonstrate that it is a "feasible and economical substitute[]" for the technology at issue. Op. *4.[8]

Judge Posner also appropriately rejected any reading of § 284 that would require an award of "substantial 'compensatory' damages" when a patentee suffers "no tangible injury." Op. *7. An act of "harmless" infringement may warrant an award of "nominal damages if no injury were proved." *Id.* at *6 (comparing harmless infringement to harmless trespass); *see id.* (nominal damages "are a symbolic recognition of a wrong that produced no harm, though it may have infringed a right"). But it is plainly not the case that "*any* act of infringement, even if it gives rise to no measureable damages, is an injury entitling" a patentee to

[8] Relatedly, Judge Posner correctly concluded that damages evidence that could not plausibly support a patentee's theory of damages is inadmissible, *see* May 22 Order *9, and that questions of the admissibility of such evidence are properly resolved pre-trial, *see id.* at *7—it is unacceptable to present the jury with unreliable and analytically flawed evidence and then leave the jury to its own devices.

"substantial damages." *Id.* at *5-*6 (emphasis in original); *see id.* at *7 (explaining that § 284 should not "be read to entitle a patentee to a [non-nominal] royalty if it proves infringement even if it presents no evidence at all of harm").

CONCLUSION

For all of these reasons, irrespective of how this Court decides the merits of the parties' appeal—an issue on which amici decidedly take no position—it should conclude that injunctive relief is unavailable under the circumstances described herein and that the amount of reasonable royalty damages available to a patentee is no greater than the value of the patented technology over the alternative at the time of the design decision.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to Federal Rules of Appellate Procedure 29(c)(7) and 32(a)(7)(C), the undersigned certifies that, as counted by Microsoft Word 2010, this brief complies with Federal Rule of Appellate Procedure 32(a)(7)(B) in that it contains 6,989 words.

The undersigned further certifies that this brief, which was prepared in the 14-point Times New Roman font of Microsoft Word 2003, complies with the typeface and type style requirements of Federal Rule of Appellate Procedure 32(a)(5) and (a)(6).

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CERTIFICATE OF SERVICE

I, D. Zachary Hudson, hereby certify that on December 4, 2012, I electronically served a copy of the foregoing brief for amici curiae, Verizon Communications Inc., American Association of Advertising Agencies, and Ford Motor Company in support of neither party via the Court's CM/ECF system on the following:

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