

2014-1492

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CARNEGIE MELLON UNIVERSITY,

Plaintiff-Appellee,

v.

MARVELL TECHNOLOGY GROUP, LTD.
and MARVELL SEMICONDUCTOR, INC.,

Defendants-Appellants.

Appeal from the United States District Court for the Western District of Pennsylvania
in case no. 2:09-cv-00290-NBF, Judge Nora Barry Fischer

**BRIEF OF *AMICI CURIAE* BROADCOM CORPORATION,
ARUBA NETWORKS, INC., DELL INC., GOOGLE INC.,
HEWLETT-PACKARD CORPORATION, LIMELIGHT NETWORKS, INC.,
MICROSOFT CORPORATION, SAS INSTITUTE INC., AND XILINX, INC.
SUPPORTING APPELLANTS ON THE WORLDWIDE DAMAGES ISSUE**

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August 11, 2014

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Microsoft Corporation, SAS Institute Inc., Xilinx, Inc.

The names of the real parties in interest (if the parties named in the caption are not the real party in interest) represented by me are:

same

All parent corporations and any publicly held companies that own 10 percent or more of the stock of the *amici curiae* represented by me are:

Goldman Sachs owns 10% or more of the shares of Limelight Networks, Inc.

The names of all law firms and the partners or associates that appeared for the party or *amici curiae* now represented by me in the trial court or are expected to appear in this Court are listed below.

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Dell Inc. is privately held. Denali Intermediate Inc. is its parent company, and no publicly held corporation holds 10% or more of Denali Intermediate Inc.'s stock.

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INTRODUCTION

With the consent of all parties, Broadcom Corporation, Aruba Networks, Inc., Dell Inc., Google Inc., Hewlett-Packard Company, Limelight Networks, Inc., Microsoft Corporation, SAS Institute Inc., and Xilinx, Inc. submit this *amicus* brief urging the Court to reverse the district court's astonishing award of over \$1.5 billion in damages based on Marvell's chip sales worldwide. *Amici* take no position on the validity and infringement of Carnegie Mellon's patent claims, and this brief assumes that Marvell must pay Carnegie Mellon some reasonable royalty. The award in this case, however, was not a reasonable and legally sound royalty because over $\frac{3}{4}$ of the royalty base consisted of products made and used entirely outside this country.

The district court recognized that making, using, and selling chips in other countries did not infringe Carnegie Mellon's U.S. patent claims. Nevertheless, the court allowed the jury to base an award on Marvell's worldwide sales on the theory that Marvell could not have sold any chips anywhere if it had not used the claimed method while developing, testing, and marketing chips in this country. In so doing, the district court effectively held that but-for causation and the goal of compensating the plaintiff trumped the principle that U.S. patent law does not apply to actions outside this country. As shown below, the district court's ruling was wrong as a matter of law and would be disastrous as a matter of policy.

In *Power Integrations, Inc. v. Fairchild Semiconductor International, Inc.*, 711 F.3d 1348 (Fed. Cir. 2013), *cert. denied*, 134 S. Ct. 900 (2014), this Court held that the patent holder could *not* claim damages based on the infringer's worldwide sales because the U.S. patent laws do not cover sales of products abroad. The Court rejected the notion that but-for causation and the goal of full compensation can trump the territorial limitations of U.S. law, and, relying on Supreme Court cases such as *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007), held that neither liability nor damages may be based on making, using, or selling an invention abroad. The issue here is the same: whether worldwide sales volumes may be used to quantify damages from domestic infringement. It makes no difference that Carnegie Mellon asserted method claims rather than apparatus claims and sought a reasonable royalty rather than lost profits. And any practical difficulties in estimating the number of Marvell chips that were imported into and used in this country could not justify including 100% of them in the royalty base.

The district court's logic was also inconsistent with this Court's domestic damages jurisprudence. In *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995) (en banc), the Court emphasized that but-for causation is too expansive to be the sole test for compensable damages. The Court's "convoyed sales" cases reflect that rule of law, and Carnegie Mellon essentially made a convoyed-sales argument.

Finally, the Court should bear in mind the dangerous consequences of affirming the district court's unprecedented rule of law. To begin with, allowing U.S. patentees to recover based on worldwide sales may require defendants to pay twice—once here and once again abroad. In any event, the intrusion on foreign sovereignty would both encourage other nations to retaliate and discourage them from cooperating with U.S. intellectual property initiatives. Finally, allowing U.S. patentees to base damages on worldwide sales would threaten massive liability and encourage innovative companies to move research, development, and testing activities abroad.

As a matter of both law and sound policy, the damage award cannot stand.

STATEMENT OF INTEREST

The companies submitting this brief are leaders in developing technology for computing and communications. *Amici* have no particular interest in the merits of Carnegie Mellon's infringement claims: none has been accused of infringing the patents-in-suit, and most do not buy chips from Marvell. *Amici* are, however, deeply concerned that an affirmance would become a dangerous precedent for awarding *U.S.* patent infringement damages based on *worldwide* sales.

Marvell's business model is fairly typical for a component supplier. Component suppliers often perform research and development in this country and design their products here, but the products themselves often are manufactured and

sold overseas. Other companies then incorporate the components into complex end products such as computers, cellphones, routers, and modems and ship the finished products worldwide. Only a fraction of the components and the end products into which they are incorporated are ultimately imported into the U.S.

Before this case, the law was clear: if a company infringed a U.S. patent, damages would be based on the volume of products made, used, sold, offered for sale, or imported in the U.S. Defendants had no reason to think they would owe U.S. patent royalties on all their sales worldwide simply because a U.S.-patented method was used in the U.S. at some point in the extended process of designing, testing, and marketing products for manufacture and use abroad. Instead, they expected liability based on foreign sales and use to be governed by foreign law.

If the district court's contrary view allowing U.S. courts to impose royalties based on worldwide sales becomes law, it would have grave consequences for *amici* and other innovative companies. As in this case, the potential liability could be staggering, and in some cases defendants may face duplicative exposure under foreign patents as well. These concerns, along with the risk that other nations will reciprocate or retaliate, have led *amici* to step forward and urge this Court to rein in the district court's dangerous interpretation of patent damages law.

No party or counsel for a party has authored any portion of this brief, and no one other than *amici* and their counsel has made a financial contribution to it.

ARGUMENT

A. *Power Integrations* and the territorial limitations on U.S. patent law require reversal of the damage award based on Marvell’s worldwide sales

In *Power Integrations*, the patent holder sought to recover worldwide damages on the theory that (a) the defendant’s U.S. infringement had caused the patentee to lose sales in other countries as well as the U.S. and (b) the Patent Act provides full compensation for any damages resulting from infringement in the U.S. This Court squarely rejected that argument, relying on a long line of Supreme Court decisions and holding that U.S. patent law does not allow patentees to recover damages based on sales in foreign countries. *See id.* at 1370-72 (citing *Microsoft v. AT&T*, 550 U.S. 437; *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972); and *Brown v. Duchesne*, 60 U.S. 183 (1856)). Although this case involves method claims rather than apparatus claims and a “reasonable royalty” award rather than a lost-profits award, the Court’s logic in *Power Integrations* fully applies and compels rejection of the damage award here.

1. *Power Integrations* rejected the theory that patentees are entitled to recover worldwide damages for domestic infringement, holding that territorial limits apply

Power Integrations claimed that Fairchild infringed its U.S. patent claims by manufacturing, selling, and importing mobile phone chargers. *Id.* at 1354, 1369. Although the district court originally allowed Power Integrations to claim lost

profits worldwide, the court granted a remittitur after trial and reduced the jury's damages award by 82% to limit it to lost domestic sales. *Id.* at 1369-70. On appeal, Power Integrations sought restoration of the original award on the theory that it would have made the foreign sales but for Fairchild's U.S. infringement and that such worldwide damages were reasonably foreseeable. *Id.* at 1370. Power Integrations also argued that the principle of full compensation for harm resulting from infringement had "no inherent, per se geographical limits." *Id.* at 1371.

This Court rejected that argument, however, and held that Power Integrations was *not* entitled to damages based on Fairchild's foreign sales—even assuming Fairchild's domestic infringement had enabled Fairchild to make those foreign sales. In particular, even if Fairchild's foreign sales wins were "the direct, foreseeable result of Fairchild's domestic infringement," U.S. patent law did not authorize Power Integrations to recover damages based on Fairchild's sales abroad because "foreign exploitation of a patented invention ... is not infringement at all." *Id.* The Court concluded that "the entirely extraterritorial production, use, or sale of an invention patented in the United States is an independent, intervening act that, under almost all circumstances, cuts off the chain of causation initiated by an act of domestic infringement." *Id.* at 1371-72.

In so holding, this Court relied on the long line of Supreme Court decisions recognizing a strong presumption that U.S. patent laws have no extraterritorial

effect. Indeed, “[t]he [general] presumption that United States law governs domestically but does not rule the world applies with particular force in patent law.” *Microsoft v. AT&T*, 550 U.S. at 454-55. That is so because “[o]ur patent system makes no claim to extraterritorial effect;” our legislation ““d[oes] not, and [was] not intended to, operate beyond the limits of the United States,’ and we correspondingly reject the claims of others to such control over our markets.” *Deepsouth*, 406 U.S. at 531 (quoting *Brown*, 60 U.S. at 195).

Power Integrations made clear that patentees cannot circumvent this principle by recasting arguments for extraterritorial liability as claims to worldwide damages caused by domestic infringement. Because Fairchild’s infringing acts in this country enabled it to make foreign sales that Power Integrations would have made but for the domestic infringement, the case presented a square conflict between “the presumption against extraterritoriality” and “the principle of full compensation.” 711 F.3d at 1371. And this Court held that the territoriality principle prevailed. *Id.* Despite the causal link between the U.S. infringement and the foreign sales, awarding damages calculated based on Fairchild’s foreign sales would have effectively imposed liability for foreign exploitation of a U.S.-patented invention—contrary to settled law. *Id.* The Court cautioned that ““the presumption against extraterritorial application would be a craven watchdog indeed if it retreated to its kennel whenever *some* domestic activity is involved in the case.””

Id. at 1372 (quoting *Morrison v. Nat'l Australia Bank Ltd.*, 130 S. Ct. 2869, 2884 (2010)).

2. The district court's damage award violated the territorial limitations recognized in *Power Integrations*

In this case, Carnegie Mellon asserted method claims and contended that Marvell infringed by using the patented methods in this country and inducing others to use the patented methods in this country. All of Marvell's chips were manufactured abroad, and by Carnegie Mellon's own admission over $\frac{3}{4}$ of them were never imported into the U.S. and were therefore never used in the U.S. [See A246] Nevertheless, the district court allowed Carnegie Mellon's expert to calculate damages based on Marvell's chip sales worldwide. Indeed, the district court instructed the jury, over Marvell's objection, that

Marvell cannot be found to have directly or indirectly infringed in connection with chips that are never used in the United States. To the extent, however, that Marvell achieved sales resulting from Marvell's alleged infringing use during the sales cycle, you may consider them in determining the value of the infringing use.

[See A237]

In denying Marvell's post-trial motions, the district court reasoned because the industry "sales cycle" required extensive use of the patented methods in this country (e.g., during product development, testing, and demonstrations) and all of Marvell's chip sales worldwide resulted from those efforts, the jury could properly

include Marvell's worldwide sales in the base used to calculate the reasonable royalty owed. Simply put, the district court ruled that because Marvell's infringing domestic uses were a but-for cause of Marvell's worldwide sales, it was appropriate for the jury to include all of Marvell's worldwide sales within the royalty base. [See A234-38, A241-45, A248, A253-54]

The district court's reasoning was contrary to *Power Integrations* and the territorial limitations on the reach of U.S. patent law on which *Power Integrations* relied. Under *Power Integrations*, but-for causation of foreign sales and the goal of fully compensating for domestic infringement *cannot* justify calculating a patent damage award based on a defendant's sales outside this country.

Power Integrations involved patented *devices* whereas this case involved patented *methods*, but that is all the more reason why Marvell's worldwide chip sales were not a proper basis for a U.S. patent infringement award. As this Court recognized in *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1320-21 (Fed. Cir. 2005), only *use of a method in this country* can infringe a method claim under 35 U.S.C. § 271(a).¹ The district court thought Marvell had sold or offered to sell chips in this country even though the chips were manufactured and delivered to Marvell's customers in Asia. [A250-52] But even if that conclusion could be

¹ 35 U.S.C. § 271(g) is more complex, but Carnegie Mellon did not allege infringement under that statute.

squared with this Court’s precedent,² it was irrelevant because merely selling or offering to sell a device that can be used to practice a patented method does not infringe. At most the jury might have treated Marvell’s unit sales as a *proxy* for use of the claimed method. But even if so, all of Marvell’s chips were manufactured outside the U.S., and the vast majority of them were never imported. Carnegie Mellon did not argue, and the jury could not have found, that all of Marvell’s chips were used in the U.S. in an infringing manner.

Instead, Carnegie Mellon’s argument was that Marvell’s domestic use of *other* chips in *previous* product development, testing, and qualification *enabled* Marvell to make sales that resulted in foreign use of the claimed invention. But under *Power Integrations*, the “entirely extraterritorial ... use ... of an invention patented in the United States” constitutes an “independent, intervening act” that “cuts off the chain of causation” flowing from the original domestic infringement. 711 F.3d at 1371-72. Marvell’s foreign-made, never imported, and never domestically used chips should have been excluded from the base on which Carnegie Mellon’s damages were calculated.

² See *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1309 (Fed. Cir. 2010) (“The focus should not be on the location of the offer, but rather the location of the future sale that would occur pursuant to the offer.”).

To be sure, if a defendant has manufactured infringing articles in this country and then exported and sold *those particular articles* abroad, the defendant's revenue from those sales may be used in calculating the royalty owed for the infringing act of *domestic manufacturing*. See *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1519 (Fed. Cir. 1984) (royalty base properly included foreign sales of infringing carsets that were manufactured in the U.S.; domestic manufacture rendered the question “[w]hether those carsets were sold in the U.S. or elsewhere ... irrelevant”). But as *Power Integrations* makes clear, that logic does not extend to foreign sales of *other* articles that were *not* themselves made, used, or sold in this country or imported into the U.S. See 711 F.3d at 1371 (U.S. law does not compensate for “foreign exploitation of a patented invention, which is not infringement at all”). In this case, the vast majority of Marvell's chips were made and used only in foreign countries. Even if unit volumes were a fair proxy for the amount of use of the claimed invention, the royalty base should have been limited to chips imported into and used in this country either by Marvell itself or by others in a manner actively induced by Marvell.³

³ Carnegie Mellon contended that Marvell both directly infringed by using its chips in this country and indirectly infringed by actively inducing others to infringe in this country. If Carnegie Mellon proved that Marvell induced U.S. end-users to infringe, the reasonable royalty analysis could at most take into account the volume of chips imported into and used in an infringing manner in this country—not the
(footnote continued on next page)

3. The district court’s grounds for distinguishing *Power Integrations* do not withstand scrutiny

The district court tried to distinguish *Power Integrations* on two grounds, but neither of them was valid.

a. *Power Integrations* raised the same issue: whether worldwide sales may be used to quantify damages from domestic infringement

The district court primarily distinguished *Power Integrations* by describing it as a case in which the patentee sought “damages for injury caused by *infringing activity that occurred outside the territory of the United States.*” [A240-41 (quoting 711 F.3d at 1371) (emphasis added by district court)] By contrast, the district court reasoned, Carnegie Mellon sought damages only for domestic use of the patented invention. [A241-45] But the district court misunderstood the issue in *Power Integrations*.

Power Integrations did not purport to claim damages for infringement outside this country. Instead, it argued that Fairchild’s foreign sales should be considered when calculating the damages for Fairchild’s domestic infringement. In particular, *Power Integrations* contended that Fairchild had infringed domes-

entire volume of Marvell chips sold worldwide. *See DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1303 (Fed. Cir. 2006). If Carnegie Mellon failed to prove inducement, the royalty base should have been limited to the smaller volume of chips that Marvell itself used in an infringing manner in this country.

tically by selling infringing products in this country, that those infringing sales enabled Fairchild to make foreign sales of other articles, and that Power Integrations was entitled to a portion of those foreign revenues because the domestic infringement was a but-for cause of the foreign sales and the foreign sales were a direct, foreseeable result of the domestic infringement. 711 F.3d at 1370-71. This Court rejected that argument, holding that extraterritorial use of an invention is an independent, intervening act that “cuts off the chain of causation initiated by domestic infringement.” *Id.* at 1371-72. That phrasing confirms the Court’s understanding that the patentee was not alleging foreign acts of infringement, but instead claiming that foreign sales were damage caused by domestic infringement.

Carnegie Mellon is making essentially the same argument in this case: it asserts that Marvell’s foreign sales were a direct result of Marvell’s domestic infringement and that Carnegie Mellon is thus entitled to a share of those foreign revenues as damages. This Court should reject that argument in the same way: by holding that, as a matter of law, Carnegie Mellon may not calculate damages based on chips that practice the claimed invention only abroad—even if the sales of those chips would not have occurred but for domestic infringement—because foreign acts are independent, intervening activity that the U.S. patent laws do not cover. *See Microsoft v. AT&T*, 550 U.S. at 455 (“[C]ourts should ‘assume that legislators take account of the legitimate sovereign interests of other nations when they write

American laws.’”) (quoting *F. Hoffmann-La Roche Ltd. v. Empagran S.A.*, 542 U.S. 155, 164 (2004)). As in *Power Integrations*, the problem is not that Carnegie Mellon is directly asserting liability for foreign infringement, but instead that Carnegie Mellon is effectively claiming damages for foreign conduct. Carnegie Mellon could not have obtained an injunction barring Marvell from making, using, or selling chips abroad in the future, and it similarly was not entitled to a damage award based on chips made, used, or sold abroad in the past.⁴

b. The logic of *Power Integrations* applies to reasonable-royalty damages as well as to lost-profits damages

Without further elaboration, the district court also distinguished *Power Integrations* on the basis that the plaintiff there sought lost profits, whereas Carnegie Mellon claimed a reasonable royalty. [A240] But that is a distinction without a meaningful difference.

⁴ The district court’s distinction also ignores the parallels between this case and *Microsoft v. AT&T*. There Microsoft directly infringed by installing Windows[®] software on its own computers during the software development process and conceded that it had induced U.S. end-users to infringe. 550 U.S. at 446. AT&T, however, claimed damages based on Microsoft’s worldwide sales, invoking 35 U.S.C. § 271(f) and contending that the products Microsoft sold abroad were copies of master disks made in this country. The Supreme Court rejected AT&T’s view of Section 271(f), but if the district court’s logic here were correct, AT&T would have had no need to rely on that statute: it could have claimed worldwide damages under 35 U.S.C. § 271(a) on grounds that Microsoft could not have sold any products abroad without domestically infringing. The entire case was litigated on the premise that AT&T could not do so. In any event, even if the argument remained open after *Microsoft v. AT&T*, *Power Integrations* forecloses it.

The reasonable-royalty award here was no less rooted in foreign sales than the lost-profits award in *Power Integrations*. In this case, the district court awarded a per-unit royalty on chips that were made outside the country and never imported on the theory that those sales resulted from infringement by using other chips within the U.S. The damage award measured the extent of foreign use of the claimed invention just as the award in *Power Integrations* did.

In refusing to narrow the royalty base, the district court heavily relied upon the causal link between the domestic infringing uses and Marvell's worldwide sales. But that was the very rationale that *Power Integrations* rejected. 711 F.3d at 1371-72. Indeed, the district court based its decision on *but-for* causation [A254], which requires even less than the *direct, foreseeable* causation that this Court held inadequate in *Power Integrations*.

To the extent the district court concluded that the "hypothetical negotiation" construct removed this case from the purview of *Power Integrations*, it erred. It is circular to argue that the parties to a hypothetical negotiation would have included noninfringing, foreign-made, foreign-sold, foreign-used chips in the U.S. royalty base because no reasonable licensee would agree to do so unless U.S. law provided for damages based on sales of those chips. Regardless of what an expert may persuade a jury that the parties "might have agreed to," the hypothetical negotiation is merely a conceptual framework used to estimate the royalty allowed by law.

See Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 1384 (Fed. Cir. 2001). A tool for approximating the patentee’s loss cannot expand the scope of the right to damages under the patent laws. This Court has held that in all cases—including reasonable-royalty cases—“the damages inquiry must concentrate on compensation for the economic harm *caused by infringement* of the claimed invention.” *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010) (emphasis added) (discussing the nature of the reasonable-royalty inquiry). And *Power Integrations* held, as a matter of law, that an infringer’s foreign sales do *not* qualify as economic harm proximately caused by infringement of a U.S. patent.⁵

⁵ This Court has previously recognized that the hypothetical-negotiation paradigm must take proximate causation into account. With respect to the royalty base in particular, the Court has held that a patent holder may not invoke the Entire Market Value Rule and base damages on the entire value of a multi-component product unless it shows that the patented feature “is what motivates consumers to buy” the entire product. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012). That requirement ensures that the damage award is proximately caused by the infringement. *Id.* at 69 (“a royalty could not be properly calculated based on the value of the entire Outlook program because ‘there was no evidence that anybody anywhere at any time ever bought Outlook ... *because* it had [the patented] date picker’”) (quoting *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1332-33 (Fed. Cir. 2009)); *see also* Peter E. Strand, *Back to Bedrock: Constitutional Underpinnings Set “New” Standards for Patent Infringement Causation*, 8 B.U. J. SCI. & TECH. L. 375, 434 (2002) (recognizing that the Entire Market Value Rule “is essentially a rule of proximate causation”).

The district court further erred when it suggested that Carnegie Mellon's damages need not correspond to chips used in this country because industry practice was to license chips on a worldwide basis. [See A245-46] Even if the licenses here could be deemed comparable, industry practice cannot justify awarding damages that exceed the scope of the claimed invention. See *Apple Inc. v. Motorola, Inc.*, ___ F.3d ___, Nos. 2012-1548, -1549, 2014 WL 1646435, *28 (Fed. Cir. Apr. 25, 2014) (industry practice of licensing large portfolios of standard-essential patents did not justify a premium rate for a single patent because "damages must be carefully tied to the claimed invention itself"). Even if worldwide *licensing* is common, it does not follow that worldwide *damages* are appropriate for infringing a U.S. patent. Royalties for infringing U.S. method patents under Section 271(a) must be based on infringing uses, and such uses can occur only in the U.S. See *ResQNet*, 594 F.3d at 871-72 (licenses relied upon to determine a reasonable royalty rate must have conveyed rights commensurate with the rights infringed).

In the end, the policy against extraterritorial extension of the patent laws that lay at the heart of *Power Integrations* applies no less to reasonable royalty awards than to lost profits damages. Because "foreign law alone, not United States law," governs the use of patented processes in foreign countries, *Microsoft v. AT&T*, 550 U.S. at 456, any award of damages based on sales and uses abroad would impinge on the sovereignty of foreign nations. The extent of the intrusion does not depend

on whether the patent holder happens to sell a competing product and may therefore be eligible to recover its lost profits. In *Power Integrations*, this Court emphasized that the fundamental question was whether a patentee may claim damages based on “activity that occurred outside the territory of the United States,” and that the answer was the same—*no*—“[r]egardless of how the argument is framed.” 711 F.3d at 1371. Contrary to the district court’s suggestion, framing the inquiry as a “reasonable royalty” issue rather than a “lost profits” issue changes neither the fundamental question nor the legal answer.

4. Any difficulties in identifying which chips eventually enter the U.S. did not justify including all worldwide sales in the royalty base

In justifying a royalty based on Marvell’s worldwide sales, the district court cited a lack of solid evidence on how many of Marvell’s foreign-manufactured chips were imported into this country. [A246] The court then posited that where it is impossible to apportion between infringing and noninfringing items, “the infringer must bear the burden and the entire risk.” [A247 (quoting *Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 799 (Fed. Cir. 1988))] That reasoning was erroneous.

As a general rule, the burden of proving damages rests with the patent holder. *See, e.g., Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). The case law on which the district court relied simply says that the

infringer bears the consequences when its failure to keep accurate records makes it hard to distinguish infringing products from noninfringing products. *See, e.g., TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 900 (Fed. Cir. 1986). But this is not a case of Marvell keeping faulty sales records. Marvell is a component supplier, and component suppliers have no way to track what their OEM customers do with the components they buy. Moreover, as discussed above, this is not a case where product sales themselves infringe. Infringing a U.S. method patent requires *using the method in this country*, and Marvell and other component suppliers have no way to track how many end users far downstream use their products in the U.S.

The burden thus remained on Carnegie Mellon to prove (with reasonable certainty) how many Marvell chips were likely used in this country and should be included in the royalty base. In fact, Carnegie Mellon's expert offered two estimates of how many Marvell chips were imported into the U.S. [*See* A246, A256 (329.3 million or 556.8 million chips imported, out of 2.338 billion chips sold worldwide)] Even assuming the jury was entitled to credit one of those estimates and treat those imports as a proxy for U.S. use of the patented method, the district court clearly erred in allowing the jury to treat Marvell's worldwide sales as the royalty base. Because Marvell's chips were all manufactured abroad and less than $\frac{1}{4}$ of them were imported into this country, no reasonable juror could assume that 100% of them were used in the U.S. and belonged in the royalty base.

5. Any problems with calculating a royalty based on Marvell's actual use of chips in this country did not justify the district court's use of a legally flawed approach

The district court also rationalized its use of Marvell's worldwide sales on grounds that other ways of calculating damages were problematic. The court acknowledged that Marvell's only use of the patented methods in the U.S. involved simulations and engineering sample chips but concluded that calculating a reasonable royalty based on the number of simulators or sample chips was "not promising as they [we]re not products in the market place." [A236] The court also thought it would be "impractical" to base the royalty on how many times Marvell used the method because the calculations are run many times per second. [*Id.*]

But any such difficulties could not justify using Marvell's worldwide chip sales as the royalty base. Under *Power Integrations*, manufactures, uses, and sales of products abroad are intervening events that break any causal link to domestic infringement. Even if it were appropriate for Carnegie Mellon to base its royalty on the volume of Marvell chips imported into this country, the jury should not have been allowed to award damages based on chips that never reached U.S. shores.

B. The district court's unbridled but-for causation approach to calculating damages conflicts with settled principles of patent damages law that apply even in purely domestic cases

As discussed above, the district court's logic was that a patent holder may recover a royalty on noninfringing sales as long as the infringement was a but-for

cause of those sales. The court accordingly instructed the jury that it could consider any sales “resulting from” Marvell’s alleged infringing use in determining the value of that use. [See A237] That but-for logic, however, contradicted settled principles of damages law that govern even in the purely domestic context.

In *Rite-Hite v. Kelley*, this Court, sitting *en banc*, held that mere but-for causation is *not* a sufficient basis to include revenues in a damages calculation under 35 U.S.C. § 284. 56 F.3d at 1546. At the outset, the Court, citing a leading tort-law treatise, noted the expansiveness of but-for causation:

“In a philosophical sense, the consequences of an act go forward to eternity, and the causes of an event go back to the dawn of human events, and beyond. But any attempt to impose responsibility upon such a basis would result in infinite liability for all wrongful acts, and would ‘set society on edge and fill the courts with endless litigation.’ As a practical matter, legal responsibility must be limited to those causes which are so closely connected with the result and of such significance that the law is justified in imposing liability. Some boundary must be set to liability for the consequences of any act, upon the basis of some social idea of justice or policy.”

Id. n.4 (quoting W. Page Keeton et al., *Prosser & Keeton on the Law of Torts* § 41, at 264 (5th ed. 1984)). The Court thus “affirm[ed] that the ‘test’ for compensability of damages under § 284 is not solely a ‘but for’ test in the sense that an infringer must compensate a patentee for any and all damages that proceed from the act of patent infringement.” *Id.* at 1546. “Notwithstanding the broad language of § 284, judicial relief cannot redress every conceivable harm that can be traced to

an alleged wrongdoing. ... Thus, along with establishing that a particular injury suffered by a patentee is a ‘but for’ consequence of infringement, there may also be a background question whether the asserted injury is of the type for which the patentee may be compensated.” *Id.*

In some cases, those additional limitations have been labeled matters of “proximate causation.” *Id.* at 1559. Indeed, this Court relied on proximate causation in *Power Integrations*. 711 F.3d at 1371-72 (discussing foreseeability and holding that foreign practice of an invention “cuts off the chain of causation initiated by an act of domestic infringement”). In other cases, the Court has used different terminology. But although the verbal formulations have varied, the Court has consistently recognized that legal and policy limitations must cabin the expansive but-for analysis, as otherwise patentees will be overcompensated and other important legal principles will be compromised.

For example, under the district court’s but-for causation logic, patent holders could claim unlimited conveyed sales even though settled law limits such recovery. If the district court were correct, a patent holder could routinely claim damages based on all sales of other, unpatented products that the infringer would not have sold but for the sale of its infringing product. But that is not the law. In *Rite-Hite*, this Court held that damages may *not* be based on conveyed sales of other, noninfringing products unless those other products are part of the same

assembly or constitute a functional unit. 56 F.3d at 1550-51; *see also Am. Seating Co. v. USSC Group, Inc.*, 514 F.3d 1262, 1268 (Fed. Cir. 2008) (patented and non-patented products must together form a functional unit and not be sold together merely for reasons of customer demand).

Of course, Carnegie Mellon did not label Marvell's worldwide sales as convoyed sales. But the analysis is analogous: Carnegie Mellon argues that Marvell's infringing acts in this country enabled Marvell to sell noninfringing products made and used only abroad. And the law of convoyed sales shows that some sales, although causally related, are too far removed from the infringement to be a proper basis for a damages award. That is the case here as well.

C. Compelling policy considerations also weigh heavily against sustaining the district court's rule of law

Even if existing precedent were not dispositive, policy considerations would compel reversal. The district court's reasoning would open the door to duplicative awards where the plaintiff or others hold foreign counterpart patents. Moreover, even where no foreign patents exist, the district court's approach would intrude on foreign sovereignty, violate principles of comity and territoriality that the Supreme Court has declared are especially weighty in patent law, and encourage other nations to extend their patent laws to cover activities in the U.S. Last but not least, extending U.S. patent damages to cover products that never touch American soil would run contrary to well-settled, justified commercial expectations and would

encourage technology companies to move research and development activities offshore.

1. The district court’s approach would expose defendants to duplicative damage awards

The district court’s pure but-for causation logic failed to account for a traditional concern of damages law: avoiding duplicative damage awards. *See, e.g., Pope Mfg. Co. v. Gormully & Jeffery Mfg. Co.*, 144 U.S. 248, 251 (1892) (holder of exclusive rights to one embodiment of patent lacked standing to sue, as allowing suit would expose parties “to be[ing] harassed by a multiplicity of suits instead of one, and to successive recoveries of damages by different persons holding different portions of the patent-right”).

The district court held that a defendant may be found liable to pay damages for U.S. patent infringement based on the volume of its worldwide sales, including foreign sales. But holders of foreign counterpart patents would also be able to sue the defendant under foreign laws—and obtain a second set of damages based on the exact same foreign sales or uses of the patented invention. Although some countries may follow the U.S. principle precluding double recovery, even that would not protect the defendant where the foreign rights holder and the U.S. holder are not the same.

2. Awarding damages based on sales abroad would impinge on foreign governments' sovereignty and invite retaliation

If this Court were to affirm and hold that U.S. courts may apply U.S. patent law to impose royalties on sales and uses in foreign countries, it would intrude into foreign sovereigns' authority to regulate sales and use of patentable inventions in their jurisdictions. And that intrusion, in turn, would encourage foreign governments to retaliate, either by similarly allowing their patent laws to reach the sale and use of inventions in this country or by refusing to cooperate with U.S. intellectual property protection initiatives. Both results would be intolerable.

The district court's holding that Marvell must pay a royalty on chips manufactured, say, in Taiwan and used, say, in Germany, without ever entering the U.S., would be a direct interference with the prerogative of those countries to decide whether making and using those chips in those countries was proper or improper. In countries where the U.S. patent holder does not have a foreign counterpart patent, calculating damages based on sales or uses there would intrude upon the public domain. More generally, in the Supreme Court's words, "[f]oreign conduct is [generally] the domain of foreign law,' and in [patent law] in particular, foreign law 'may embody different policy judgments about the relative rights of inventors, competitors, and the public in patented inventions.'" *Microsoft v. AT&T*, 550 U.S. at 455 (quoting the Solicitor General's *amicus* brief).

Awarding U.S. patent damages based on entirely foreign manufacture, sale, or use of products would encourage foreign governments to reciprocate. Americans would surely take affront if, say, a French court were to impose patent royalties on making, using, or selling products in this country even though doing so infringed no U.S. patent. Americans should expect other nations to feel the same way. Moreover, overreaching of this sort is likely to impede American efforts to secure more consistent enforcement of intellectual property rights in other countries. At a minimum, it would make courts in other nations less likely to accord comity to the patent determinations of U.S. tribunals.

3. Allowing U.S. damage awards based on worldwide sales would encourage companies to move research, development, and testing activities abroad

The alleged domestic use in this case involved research, development, and internal testing and evaluation of engineering samples. According to the district court, this precursor activity was a but-for cause of all of Marvell's worldwide sales, entitling Carnegie Mellon to a share of all of Marvell's global revenue for the chips at issue—to the tune of over \$1.5 billion. That result was astounding and explains *amici*'s participation here because *amici* currently research, design, test, and develop many of their products in this country. To *amici*'s knowledge, no U.S. court has previously awarded U.S. patent damages based on the value of products made, distributed, and used abroad. *Amici*, and technology companies

generally, were shocked to learn that a U.S. court would impose massive patent damage award based on sales of products that never touched U.S. soil and thus could not have infringed any U.S. patent.

If this Court affirms this result, it would encourage companies to relocate research, development, and testing activities outside this country to avoid exposure to enormous damages awards such as the one here. Why would a company test and validate samples in this country, for example, when doing so could expose it to a damage award based on worldwide sales? As discussed above, technology industries are highly international, and companies will be tempted to transfer as many activities as possible to jurisdictions that will not impose such draconian worldwide patent liability—even though it otherwise would be inefficient to do so.

In an era when good jobs are scarce and this country's economic health depends in large measure on technology companies, courts should be wary of expanding the scope of patent damages in a way that encourages innovative companies to move their operations abroad. U.S. patent infringement will still be adequately deterred if U.S. patent damage awards remain limited to products made, used, sold, or imported in this country.

CONCLUSION

If the Court affirms Marvell's liability for patent infringement, it should follow *Power Integrations*, adopt a bright-line rule that damages for infringing U.S. patents may not be calculated based on foreign manufacturing, sales, or uses, and overturn the excessive damage award.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 29(d). The brief contains 6,664 words, excluding the portions exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). The brief has been prepared in a proportionally spaced typeface using Microsoft® Word and 14-point Times New Roman type.

Dated: August 11, 2014.

/s/Dan L. Bagatell

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CERTIFICATE OF AUTHORITY AND PROOF OF SERVICE

I certify that I have authority from Marta Beckwith (counsel for Aruba Networks, Inc.), Anthony E. Peterman (counsel for Dell Inc.), and Ann A. Byun (counsel for Hewlett-Packard Company) to include their electronic signatures on this document.

In accordance with Federal Rule of Appellate Procedure 25 and Federal Circuit Rule 25, I certify that I caused this brief to be served via the Federal Circuit's CM/ECF system on counsel of record for all parties.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Dated: August 11, 2014, at Phoenix, Arizona.

/s/Dan L. Bagatell

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