

No. \_\_\_\_\_

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**In the  
Supreme Court of the United States**

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POWER INTEGRATIONS, INC.,

*Petitioner,*

v.

FAIRCHILD SEMICONDUCTOR INTERNATIONAL INC.,  
FAIRCHILD SEMICONDUCTOR CORPORATION, FAIRCHILD  
(TAIWAN) CORPORATION,

*Respondents.*

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ON PETITION FOR A WRIT OF CERTIORARI  
TO THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT

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**PETITION FOR A WRIT OF CERTIORARI**

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## QUESTION PRESENTED

The Patent Act guarantees a patentee “full compensation for ‘any damages’ he suffered as a result of the infringement.” *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55 (1983) (citation omitted); see 35 U.S.C. § 284. When a product has multiple components, patent law generally calls for apportioning “the patentee’s damages between the patented feature and the unpatented features.” *Garretson v. Clark*, 111 U.S. 120, 121 (1884). This Court has long held, however, that a patentee may be entitled to damages based on “the entire value of the whole machine,” when the patentee shows that the full value of the good “is properly and legally attributable to the patented feature.” *Id.* This is known as the “entire market value rule” or EMVR.

In this case, a jury found that Respondents had willfully infringed patents owned by Power Integrations, Inc., that revolutionized the efficiency of power supply controller chips used in charging electronic devices such as cell phones. Following a separate trial on damages, the jury returned a special verdict finding that Power Integrations was entitled to damages based on the entire market value of the infringing products—power supply controller chips—because the patented technology “create[d] the basis for customer demand” for the products. App. 64a.

On appeal, the Federal Circuit set the jury’s damages verdict aside. The court held that it was not enough for Power Integrations to show, as the jury found, that the patented feature drove customer demand for the infringing products. Rather, the court held, Power Integrations also was required to prove that the *other* product features did *not* drive

demand. *Id.* at 24a-25a. Because the court believed that Power Integrations had not proven that negative, the Federal Circuit held that the evidence was insufficient as a matter of law to support invocation of the EMVR in calculating damages. *Id.* at 25a.

The question presented is:

Whether a plaintiff that proves that a patented feature creates the basis for customer demand for infringing products is entitled to patent damages based on the entire market value of the products, or whether the plaintiff must also prove that other features do not drive demand for the products.

**RULE 29.6 STATEMENT**

Petitioner Power Integrations, Inc. is a publicly traded corporation, and BlackRock, Inc. owns 10% or more of its stock.

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Petitioner Power Integrations, Inc. respectfully petitions this Court for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

### **OPINIONS AND ORDERS BELOW**

The district court's order denying Fairchild's renewed motion for judgment as a matter of law, new trial, and/or remittitur is not reported, but is reprinted at App. 29a-60a. The Federal Circuit's amended opinion (*id.* at 1a-26a) is reported at 904 F.3d 965. The Federal Circuit's order denying rehearing (App. 61a-62a) is unreported.

### **JURISDICTION**

The Federal Circuit issued its initial opinion on July 3, 2018. *Id.* at 1a. On September 20, 2018, the Federal Circuit denied Power Integrations' timely petition for rehearing and issued an amended opinion. *Id.* at 1a-26a. This Court has jurisdiction under 28 U.S.C. § 1254(1).

### **STATUTORY PROVISION INVOLVED**

Section 284 of the Patent Act, 35 U.S.C. § 284, provides in relevant part:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

### **STATEMENT OF THE CASE**

In this case, the Federal Circuit effectively overwrote this Court's longstanding precedent on a question of fundamental importance to the enforcement of the Nation's patent laws. It has been

blackletter law for well over a century that when a patented invention drives consumer demand for a product, such that “the entire profit of [the] business or undertaking results from the use of the invention,” the patent holder is entitled to recover damages based on the entire value of the product, even though the patented feature is only one of several components. *Elizabeth v. Pavement Co.*, 97 U.S. 126, 139 (1877); see Albert H. Walker, *Text-book of the Law of Patents for Inventions* § 717 (John H. Hiliard & Eugene Eblé eds., 5th ed. 1917) (“Walker on Patents”) (recognizing same principle), quoted *infra* at 14-15.

That rule—known as the “entire market value rule” or EMVR—effectuates the longstanding principle central to the enforcement of the patent laws that the Patent Act “affor[ds] patent owners complete compensation’ for infringements.” *WesternGeco LLC v. ION Geophysical Corp.*, 138 S. Ct. 2129, 2137 (2018) (quoting *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 655 (1983)); 35 U.S.C. § 284. It is of course also true, as a starting principle, that patent damages ordinarily are apportioned so that damages are based on the value attributable to the infringing feature of a product. But where a plaintiff shows that the infringing feature provides the key by which a market participant unlocks the entire value of its product, “complete compensation” means damages must be based on the entire value of the product.

Lower courts have applied that common sense principle in countless cases in calculating patent damages, while insisting that plaintiffs prove that the infringing feature drove consumer demand for the product. And courts have had little difficulty applying that rule. See *infra* at n.6. The Federal Circuit in this case, however, gutted that longstanding damages rule

by imposing a new and effectively insurmountable requirement for invoking the EMVR.

It held that even where (as here) a jury specifically finds that the patented invention created the basis for consumer demand for a product, the patent holder cannot recover damages based on the full value of the product unless it also proves a negative—that *other* features did *not* drive consumer demand. App. 24a-25a. Proving a negative is always very difficult. And the court’s new standard will be almost impossible for patent holders to satisfy. Indeed, even the patent holders in the cases where this Court has applied the EMVR would have been unable to satisfy the Federal Circuit’s new standard. And the Federal Circuit’s *sub silentio* overruling of this Court’s cases on the entire market value rule will have the inevitable effect of undercompensating patent holders and allowing acknowledged, willful infringers to retain value that they could capture only through their infringing use.

This case underscores the impact of the Federal Circuit’s new rule. After a jury found that Respondents willfully infringed Power Integrations’ groundbreaking technology for power supply controller chips, the district court held a two-week trial on damages in which the entire focus was on whether the EMVR applied. After hearing the evidence and being instructed on the EMVR, the jury explicitly found that the “patented feature create[d] the basis for customer demand for the infringing . . . products,” and then awarded Power Integrations \$139.8 million in damages based on the EMVR. *Id.* at 64a. That verdict was supported by ample evidence showing that the chips at issue operated as a single integrated unit to regulate a power supply, the patented invention had revolutionized that function,



and this landmark advancement had, not surprisingly, driven demand for the chips.

Yet the Federal Circuit substituted its judgment for the jury's and threw out the jury's damages award on the ground that the evidence "was insufficient as a matter of law" under its new test, because Power Integrations had not shown that other features did *not* drive demand. *Id.* at 22a. The Federal Circuit's decision all but eliminates the EMVR as a viable tool for calculating patent damages by establishing a nearly impossible standard to meet. It overrides a century of precedent from this Court recognizing and applying the EMVR. It undermines Congress's statutory objective in Section 284 of providing patent owners "full compensation" for acts of infringement. *General Motors*, 461 U.S. at 654. And it creates disarray in an important area of law needed to remedy, and deter, patent infringement.

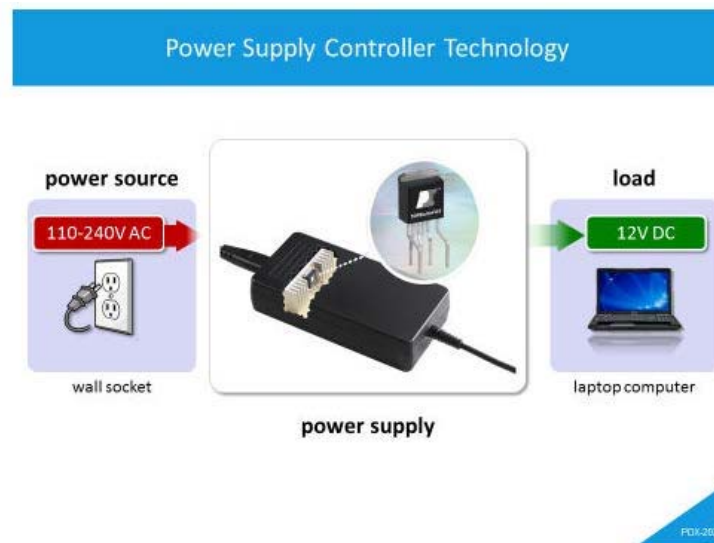
The petition should be granted.

#### **A. Factual Background**

Power Integrations manufactures controller chips used in power supplies for electronic devices, including cell phones, LCD monitors, and computers. App. 2a. Generally speaking, power supplies work by transforming high-voltage, alternating current (or AC) power from an AC outlet into the low-voltage, direct current (or DC) electricity needed to power electronic devices like cellphones and laptops. Power Integrations' technological advancements have led the migration away from large and inefficient "bricks" to smaller and more efficient electronic "switch mode" power supplies, which regulate the amount of power flowing to an electronic device by directing a power transistor in the circuit to turn on or off. Power

Integrations C.A. Fed. Br. 6-7; App. 2a-3a. The chips operate as a single integrated unit designed to supply power as efficiently as possible. App. 2a.

The attached figure illustrates power supply controller technology and the controller chips (shown as an insert to the “power supply”) at issue:



Power Integrations C.A. Fed. Br. 6.

The technology claimed in U.S. Patent No. 6,212,079 (“the ’079 patent”), owned by Power Integrations, revolutionized the “light load” efficiency of power supplies by reducing the amount of power wasted when electronic devices were plugged in but not being used. Prior-art switching regulators functioned poorly during periods of low power, because they reduced the amount of power by skipping on/off cycles of the power transistor. The invention of the ’079 patent sought to reduce the switching frequency and on-time of the power switch

over a range of operation instead, without skipping cycles, to respond to the decreasing load yet maintain high efficiency. *Id.* at 3a. This invention greatly reduced the power consumption and improved the efficiency of power supply controller chips. *Id.* at 36a.

Power Integrations introduced its first power supply controller chip with the '079 technology—the TOPSwitch-GX chip (GX chip)—in November 2000. *Id.* at 38a. The GX chip rapidly outsold Power Integrations' TOPSwitch-FX chip (FX chip), which practiced the older, “burst mode” technology but was otherwise substantially identical to the GX chip. *Id.* Indeed, there was a “very rapid decline of the FX,” as “the FX was instantly or virtually instantly of little use because the GX introduced such an important feature in the '079 [technology].” *Id.* (quoting Power Integrations' Vice President of Product Development, Appx24 (519:14-18)).

Then, in July 2001, President George W. Bush issued an executive order requiring federal agencies to purchase only electronic products capable of meeting a “one watt” efficiency standard in their standby power mode. *Id.* at 37a. At the time, the '079 technology was the only technology capable of meeting the “one watt” standard as well as other customer needs such as quiet performance. The executive order effectively made the '079 technology a necessity for power supply controller chips because the government is the largest purchaser of electronics, and using chips with the '079 technology was thus the only way to ensure that products could be purchased by the government. *Id.* at 37a-38a.

These developments ultimately led to the production of the infringing products at issue in this case. Respondent Fairchild's predecessor—System

General (SG)—itself recognized that the new federal “regulations regarding power consumption have been driving demand for power converters with reduced standby consumption,” *i.e.*, with the groundbreaking ’079 technology, which SG referred to as “green mode.” *Id.* at 39a (citation omitted). And so SG, one of Power Integrations’ direct competitors, developed the line of controller chips at issue in this case. Power Integrations immediately began losing sales of its chips to SG, especially as SG aggressively priced its chips to gain a market footprint.

In response, Power Integrations sued SG for infringing the ’079 patent in 2004. SG then sought reexamination of the ’079 patent, the validity of which the Patent and Trademark Office confirmed in 2009. SG and its successor Fairchild were thus on notice of the risk of infringement. But, in developing their line of infringing products, they did not obtain an opinion of counsel regarding infringement or invalidity. And they made no effort to design around the patents. Power Integrations’ Opp. to Fairchild’s Mot. for J. as a Matter of Law re Willfulness at 2, ECF No. 602. Instead, as the Federal Circuit observed, Fairchild “fostered a corporate culture of copying.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1369 (Fed. Cir. 2013).

Meantime, customers—which were the same for Power Integrations and SG/Fairchild—told Power Integrations that the ’079 technology was the reason for their purchase of Power Integrations’ and SG/Fairchild’s power supply controller chips. Indeed, Power Integrations’ second largest customer—one that SG was actively pursuing—specifically demanded that the ’079 technology be included in the

power supply controller chips that Power Integrations was manufacturing for it. App. 38a.

### **B. This Litigation**

In 2009, after Fairchild had acquired SG and the parties had stipulated to the dismissal of Power Integrations' infringement action against SG while the reexamination was pending, Power Integrations sued Respondents Fairchild Semiconductor Corporation and Fairchild (Taiwan) Corporation ("Fairchild") for patent infringement in the District Court for the Northern District of California. App. 30a. In 2014, following extensive discovery, a jury found that Fairchild had willfully infringed the '079 patent in producing and selling its competing chips and awarded Power Integrations \$105 million in damages by apportioning damages based on a "smallest salable unit" analysis. App. 31a.<sup>1</sup>

In light of the Federal Circuit's intervening decision in *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308 (Fed. Cir. 2014), which clarified the "smallest salable unit" approach in calculating patent damages, the district court held a new trial on damages in 2015 lasting nine days. *See* App. 5a. In the second trial, Power Integrations based its case for damages on application of the EMVR. It then proposed a total reasonable royalty of \$139.8 million

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<sup>1</sup> The jury also found that Fairchild had infringed U.S. Patent No. 6,538,908 ("the '908 patent"), which covers "an integrated circuit that can perform a variety of power-regulation functions." App. 1a, 3a. Because Power Integrations did not seek separate or additional damages for infringement of the '908 patent in securing the damages verdict at issue, this petition focuses on the infringement of the '079 patent.

to cover the 435 million infringing units sold by Fairchild over the ten-year period at issue.<sup>2</sup>

To prove that it was entitled to damages based on the entire value of the infringing chips, Power Integrations put on substantial evidence that the '079 patent created the demand for both parties' controller chips. For example, the evidence showed that:

- The '079 patented invention revolutionized the efficiency of power supply controller chips.
- The '079 patented technology became even more indispensable after President Bush issued his “one watt” directive in 2001.
- SG’s own engineer recognized that the patented technology was “driving demand” in light of the new government regulations.
- Power Integrations’ second largest customer specifically demanded that the '079 patented feature be included in its chips.
- The introduction of the GX chip with the '079 patented feature led to the “rapid decline” of the FX chip (which was virtually “identical” but for the absence of that feature).
- And the controller chips at issue had the “single purpose” of achieving the power

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<sup>2</sup> The \$139.8 million figure was based on the testimony of Dr. Jonathan D. Putnam, Power Integrations’ damages expert, who considered various factors that would have been taken into account during a hypothetical licensing negotiation and submitted a lengthy report detailing his analysis. *See* Power Integrations C.A. Fed. Br. 28-29 (discussing analysis).

regulating function that the '079 patented feature dramatically improved.<sup>3</sup>

In response, Fairchild argued that, in fact, the '079 patented technology did not create consumer demand for the chips and that the chips had other features, such as a “frequency jitter,” that customers valued. Fairchild thus argued that the evidence did not support application of the EMVR in calculating damages. In Fairchild’s view, Power Integrations was entitled, at most, to reasonable-royalty damages of \$4.6 to \$7.2 million for the decade’s worth of willful infringement that the jury had already found. Dr. Malackowski’s Summary of Opinions at 71 (Ex. D to Mot. for J. as a Matter of Law), ECF No. 955-5.

The jury heard all that evidence, including the parties’ competing views on which product feature, or features, drove customer demand for the chips, and then it was instructed as follows:

Where an infringing product has features that are covered by the patent-in-suit and features that are not covered by the patent-in-suit, there are two alternative reasonable royalty damages theories, apportionment and Entire Market Value Rule.

Under the Entire Market Value Rule, the plaintiff may be awarded damages attributable to an entire multi-feature product where the plaintiff establishes that the patented feature creates the basis for customer demand for that product. It is not enough to show that the

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<sup>3</sup> This evidence (and additional evidence) is summarized in the district court’s order denying Fairchild’s motion for judgment as a matter of law. *See* App. 36a-40a; *see also* Power Integrations C.A. Fed. Br. 21-31 (summarizing evidence).

patented feature is viewed as valuable, important or essential to the entire product.

Under the apportionment of damages rule, the ultimate damages must reflect the value attributable to the infringing features of the product, and no more. Measuring this value requires you to identify and award only the value of the patented features.

If it is not established that the patented feature creates the basis for customer demand for the product, you must apportion the royalty down to a reasonable estimate of the value of the patented feature.

It is up to you, based on the evidence, to decide what type of royalty is appropriate in this case.

Appx1953-1954 (1781:23-1782:18).

The jury unanimously returned a special verdict finding that Power Integrations was entitled to damages of \$139.8 million. App. 64a. In reaching that verdict, the jury answered “Yes” to the following question: “In arriving at the above figure, did the ’079 patented feature create the basis for customer demand for the infringing Fairchild products (Entire Market Value Rule)?” *Id.* (Verdict Form).

Fairchild moved for judgment as a matter of law, or a new trial, arguing that the evidence did not support use of the EMVR in calculating damages and challenging other aspects of the damages award. After carefully reviewing the evidence, the district court denied the motion. It explained that it was not unreasonable for the jury to conclude that “the patented feature here constitutes the basis for consumer demand for the accused products.” *Id.* at



41a. It also rejected Fairchild’s argument that the EMVR was inapplicable as a matter of law because Fairchild had offered evidence about other valuable features of the accused products. *Id.* at 44a. As the court explained, there was no evidence that other features drove demand for the products. *Id.* at 45a.

Fairchild appealed.

### C. Federal Circuit Decision

The Federal Circuit affirmed the jury’s findings of willful infringement as to the ’079 patent, but set aside the jury’s damages verdict on the ground that “the evidence presented by Power Integrations was insufficient as a matter of law to invoke the entire market value rule.” *Id.* at 26a.<sup>4</sup>

The Federal Circuit recognized that “[t]he entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for consumer demand.” *Id.* at 21a (quoting *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336 (Fed. Cir. 2009)); *see id.* (patentee must prove that “patented technology drove demand for the entire product” (quoting *VirnetX*, 767 F.3d at 1329)). But instead of applying that standard, the Federal Circuit created a new one: “Where the accused infringer presents evidence that its accused product has other valuable features beyond the patented feature, the patent holder must establish that these features do not cause consumers to

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<sup>4</sup> The Federal Circuit issued an initial panel opinion on July 3, 2018. Following a petition for rehearing, the panel issued an amended opinion on September 20, 2018. All references to the opinion in this petition are to the amended opinion.

purchase the product.” *Id.* at 24a; *see id.* (“When the product contains other valuable features, the patentee must show that those other features do not cause consumers to purchase the product.”).

Then, applying its new standard, the Federal Circuit held that the evidence was “insufficient as a matter of law to invoke the entire market value rule.” *Id.* at 26a. The court acknowledged Power Integrations’ evidence showing that the ’079 technology drove consumer demand. *Id.* at 22a, 25a n.7. Nevertheless, the court stated that “the power supply controllers had other valuable features, such as jittering.” *Id.* at 24a. And because Power Integrations did not prove that “these features, including jittering, did *not* affect consumer demand,” the court held that Power Integrations failed to meet the burden necessary to invoke the EMVR. *Id.* at 25a (emphasis added); *see id.* at 26a n.7 (Power Integrations’ “evidence does not address the other valuable features in Fairchild’s products”).

The court remanded for what would be a third trial on damages in this case in the past five years.

### **REASONS FOR GRANTING THE WRIT**

This Court has frequently intervened to protect, and police, the rules governing patent damages, because of their undeniable importance to the proper functioning of the patent system. The Federal Circuit’s decision in this case effectively abolishes the “entire market value rule” that this Court has recognized for more than a century as a valid method of calculating patent damages by replacing it with a new standard that, as a practical matter, is virtually impossible to meet. The Federal Circuit’s decision not only overrides this Court’s decisions recognizing and

applying the EMVR, but also frustrates Congress’s statutory objective, as embodied in 35 U.S.C. § 284, of ensuring that patent owners receive “full compensation” for patent infringement. *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654 (1983). And this case, in which the Federal Circuit overturned a \$139.8 million damages award grounded on a jury’s explicit finding that the patented feature created consumer demand for the accused products, starkly illustrates the consequences of the Federal Circuit’s new rule. Certiorari is warranted.

# **I. THIS COURT HAS LONG RECOGNIZED THE ENTIRE MARKET VALUE RULE FOR CALCULATING PATENT DAMAGES**

1. When an accused product has more than one component, the general rule is that damages should be apportioned “between the patented feature and the unpatented features.” *Garretson v. Clark*, 111 U.S. 120, 121 (1884) (quoting court below). This Court has long held, however, that a single, patented feature of a product may be so important to consumer demand for the product that “the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.” *Id.*; see *Elizabeth v. Pavement Co.*, 97 U.S. 126, 139 (1877); see also Walker on Patents § 722 (citing Supreme Court cases for the proposition that where “all the profits which the infringer derived from making and selling the entire thing are clearly due to the patented part,” they are “recoverable by the complainant”).<sup>5</sup>

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<sup>5</sup> Early descriptions of the EMVR often refer to disgorgement of the infringer’s profits. Disgorgement is no longer an available remedy for infringement of utility patents, see *General Motors*

This rule, known as the EMVR, is often expressed as an exception to the general apportionment principle, but it also is an extension of that principle. Both apportionment and the EMVR seek to determine an award commensurate with “the incremental value that the patented invention adds to the end product.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). In many cases, “the plaintiff’s patent is only a part of the machine and creates only a part of the profits.” *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 614-15 (1912). In such circumstances, apportionment ensures that a patent owner recovers damages based only on the value produced by the patent that was infringed.

But by the same token, in cases where use of the patented invention is so central to consumer demand that it drives the sales of the product as a whole, a proper calculation of the patented invention’s value must take account of the value of the entire product, not just the individual component or portion in which the patented invention is employed. *See, e.g., Elizabeth*, 97 U.S. at 139. Especially in cases, such as this one, where the patent holder’s products directly compete with those of the infringer, application of the EMVR ensures that the patentee receives “full compensation for ‘any damages’ he suffered as a result of the infringement.” *General Motors Corp.*, 461 U.S. at 654-55 (citation omitted).

This Court first recognized and applied the EMVR in a series of cases over a century ago. In *Hurlbut v. Schilinger*, for example, the Court affirmed a damages award based on “the entire profits made by

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*Corp.*, 461 U.S. at 654-55, but the EMVR continues to apply in the context of lost profits and reasonable royalties.

the defendant” for the laying of concrete flagging. 130 U.S. 456, 472 (1889). The plaintiff owned a patent for an improvement in concrete pavement for sidewalks. *Id.* at 469. This Court concluded, “in view of the testimony in the case,” that the concrete flagging at issue in the case “derived its entire value from the use of the plaintiff’s invention.” *Id.* at 472. The Court thus held that the damages award was properly based on the “entire value of the defendant’s pavement, as a marketable article.” *Id.*

Similarly, in *Crosby Steam-Gage & Valve Co. v. Consolidated Safety-Valve Co.*, the Court affirmed the use of the EMVR where the evidence showed that “the defendant’s valve derived its entire value from the use of the [patented] invention.” 141 U.S. 441, 454 (1891); *see also Manufacturing Co. v. Cowing*, 105 U.S. 253, 256 (1882) (relying on the EMVR where the plaintiff’s patented improvement to an oil-well pump opened up a new market and thus created the entire value of the pumps in those markets). By contrast, in *Sessions v. Romadka*, the Court acknowledged the EMVR but declined to apply it to fasteners used to close trunks, because they were an “inconsiderable part of the trunk,” and the “entire value” of the trunks was not “properly and legally attributable” to the fasteners. 145 U.S. 29, 45 (1892); *see also Garretson*, 111 U.S. at 121-22 (declining to apply the EMVR where there was no evidence that the “entire value of the mop-head was attributable to the feature patented”).

2. Lower courts have applied the EMVR for over a century as well. *See, e.g., Maimin v. Union Special Mach. Co.*, 187 F. 123, 127 (3d Cir. 1911) (affirming application of the EMVR and noting that “[t]here are many cases in which [the EMVR] is affirmed, and there is no controversy as to its propriety”); *see also*

*Force v. Sawyer-Boss Mfg. Co.*, 143 F. 894, 897-99 (2d Cir. 1906) (acknowledging the EMVR but declining to apply it where there was “no satisfactory evidence that the machine was more salable by reason of the [patent]” and where evidence showed that the defendant’s sales “were unaffected by the presence or absence of said devices”); *Roth v. Harris*, 197 F. 929, 933 (N.D.N.Y. 1912) (permitting use of the EMVR where the evidence showed “that the patented improvement was of paramount and controlling importance in effecting sales and producing profits”).

*Marconi Wireless Telegraph Co. v. United States*, for example, involved a patent for tuning “the antenna circuits of any receiving station to any desired transmitting station,” an invention of “fundamental importance to radio communication.” 99 Ct. Cl. 1, 48 (1942), *aff’d in part and vacated in part on other grounds*, 320 U.S. 1 (1943). Plaintiff urged that the invention was “fundamental or basic in character and that the entire market value rule be followed,” while defendant “urge[d] that apportionment be made” because there were “certain wireless apparatus not directly involved in accomplishing the tuning,” such as “arc transmitters, detectors, and amplifiers.” *Id.* at 47. The court concluded that the invention was “of such paramount importance that it substantially created the value of the component parts utilized in the radio transmitters and receivers.” The “complete cost of the transmitting and receiving sets” was therefore used “as the base in the application of a reasonable royalty.” *Id.* at 49.

Similarly, in *State Industries, Inc. v. Mor-Flo Industries, Inc.*, the Federal Circuit affirmed the use of the EMVR in the context of a patent for foam insulation for water heaters. 883 F.2d 1573, 1579-80

(Fed. Cir. 1989). The evidence in that case indicated that foam insulation enabled water heaters “to meet the energy code requirements imposed by many states by using less space than fiberglass-insulated heaters,” a less optimal alternative. *Id.* at 1576. The district court found that “there was a growing demand for foam-insulated water heaters” and that the patent “was the first method developed to meet this demand.” *Id.* The district court therefore based its award on the entire value of the heaters. *Id.* at 1580. The Federal Circuit affirmed, rejecting the argument that “several unidentified nonpatented components were key” to consumers’ interest in the infringing product and that the foam insulation thus “was not the basis for consumer demand.” *Id.* at 1580.

By contrast, in *LaserDynamics, Inc. v. Quanta Computer, Inc.*, the court concluded that the EMVR could not be invoked where the accused products were laptops that incorporated features like “a high resolution screen, responsive keyboard, fast wireless network receiver, and extended-life battery,” and the patented feature was a disc drive that identified whether a disc was a CD or a DVD. 694 F.3d 51, 56, 68 (Fed. Cir. 2012). Because there was “no evidence that [the disc drive] feature alone motivates consumers to purchase a laptop computer, such that the value of the entire computer can be attributed to the patented disc discrimination method,” the court held that damages could not be assessed based on the entire value of the laptops. *Id.* at 69.

3. The common thread through these decisions was the requirement that, as the Federal Circuit had expressed in a series of cases, plaintiffs seeking to invoke the EMVR must show that the patented feature creates the “basis for customer demand” for

the product. *State Indus.*, 883 F.2d at 1580; *see also* 4 Robert A. Matthews, Jr., *Annotated Patent Digest* § 30.58 (Nov. 2018 update) (“[I]f the patentee can show that the patented feature drove the sale of the product,” the patentee “may be awarded damages based on the value of the total product without any apportionment . . .”).<sup>6</sup> The plaintiff bears the burden of making this showing and, ultimately, a jury (or finder of fact) must determine whether the plaintiff has made this showing after considering the evidence.

In short, whether it is viewed as an exception to the general apportionment principle or an application of that principle to a particular fact pattern, this Court, the lower courts, and commentators have long recognized the EMVR as the appropriate method of calculating patent damages where the patented technology drives consumer demand for the accused products. In such circumstances, the EMVR is

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<sup>6</sup> *See also, e.g., VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1326 (Fed. Cir. 2014) (plaintiff must show that “the patented feature creates the basis for customer demand” (citation omitted)); *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1268 (Fed. Cir. 2013) (same); *LaserDynamics*, 694 F.3d at 67 (explaining that the EMVR “allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand” (citation omitted)); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336 (Fed. Cir. 2009) (“For the entire market value rule to apply, the patentee must prove that ‘the patent-related feature is the “basis for customer demand.”’” (citations omitted)); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1549 (Fed. Cir. 1995) (en banc) (“We have held that the entire market value rule permits recovery of damages based on the value of a patentee’s entire apparatus containing several features when the patent-related feature is the ‘basis for customer demand.’” (citation omitted)).



necessary to ensure “full compensation” for the aggrieved patent owner. *General Motors Corp.*, 461 U.S. at 654. As explained below, the Federal Circuit’s decision in this case effectively guts that rule.

## **II. THE FEDERAL CIRCUIT’S DECISION EFFECTIVELY ELIMINATES THE ENTIRE MARKET VALUE RULE**

### **A. The Decision Below Establishes A New And Insurmountable Standard For Invoking The Entire Market Value Rule**

1. The Federal Circuit’s decision in this case adds a new requirement for invoking the EMVR. It provides that, “[w]here the accused infringer presents evidence that its accused product has other valuable features beyond the patented feature, the patent holder must establish that these features do *not* cause consumers to purchase the product.” App. 24a (emphasis added). Applying this standard, the Federal Circuit held that Power Integrations could not rely on the EMVR because it had not shown that the controller chips’ other features “did *not* affect consumer demand.” *Id.* at 25a (emphasis added). In short, it is no longer enough for a plaintiff to prove that the patented feature creates consumer demand for the product. Rather, the plaintiff must now prove a negative—that “other features do not cause consumers to purchase the product.” *Id.* at 24a.

No prior decision of this Court or the Federal Circuit has ever stated such a requirement. The Federal Circuit pointed to language in *LaserDynamics* stating that the plaintiff must show that the patented feature “is what motivates consumers to buy” the accused product “in the first place,” *i.e.*, that the patented feature “alone drives

consumer demand for” the accused product. App. 24a, 25a n.7 (quoting 694 F.3d at 68). But the jury here explicitly found that “the ’079 patented feature create[d] *the* basis for customer demand for the infringing . . . products,” not *a* basis. App. 64a (emphasis added). And, in any event, the decision below goes a great deal further by requiring a plaintiff to prove the *negative* fact that other features of the product did *not* drive customer demand. That new requirement will be so difficult to meet that it effectively renders the EMVR a dead letter.

The law rarely requires a party to prove a negative, because doing so is “unfairly burdensome and contrary to the ordinary rules of evidence.” *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1394 (Fed. Cir. 1988). This basic principle is recognized throughout the law. *See, e.g., Smith v. United States*, 568 U.S. 106, 113 (2013) (observing that “[i]t would be nearly impossible for the Government to prove the negative that an act of withdrawal never happened” in the context of a conspiracy); *Professional Air Traffic Controllers Org. v. Federal Labor Relations Auth.*, 685 F.2d 547, 577 & n.65 (D.C. Cir. 1982) (construing a statute to require an affirmative showing because the agency would otherwise be required “to prove a negative” and observing that “[c]ommon sense and established principles of evidence disfavor unnecessarily placing such difficult, perhaps impossible, burdens on a party”); *Walther v. Secretary of Health & Human Servs.*, 485 F.3d 1146, 1150 (Fed. Cir. 2007) (“[I]t would be unusual to require a party to prove that ‘there is not a preponderance of the evidence,’ as our legal system rarely requires a party to prove a negative.”).

The Federal Circuit’s own decision in *Demaco Corp.*, illustrates the point. There, the court explained that a patentee may prove nonobviousness by showing that a product enjoys commercial success. 851 F.2d at 1391-92. In that context, the patentee must also establish a prima facie case of a nexus between the commercial success and the patented invention. *Id.* at 1392. The patentee is *not*, however, “required to prove as part of its prima facie case that the commercial success of the patented invention is *not* due to factors other than the patented invention.” *Id.* at 1394. “A requirement for proof of the negative of all imaginable contributing factors would be unfairly burdensome, and contrary to the ordinary rules of evidence.” *Id.*<sup>7</sup>

The Federal Circuit’s new standard will be doubly burdensome for plaintiffs because the court appeared to require the patentee to prove a negative about a different entity’s product. Among other things, in discussing why Power Integrations’ evidence was not sufficient to invoke the EMVR under its new standard, the court dismissed the powerful evidence concerning “Power Integrations’ own products,” showing that customers switched from the FX chip to the GX chip when it was introduced—chips that were virtually identical but for the patented feature. App. 25a n.7. The court explained that “this evidence does

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<sup>7</sup> In *Demaco*, the court held that the burden shifted to the challenger to “adduce evidence to show that the commercial success was due to extraneous factors other than the patented invention.” 851 F.2d at 1393. Here, however, the Federal Circuit held that the plaintiff bears the burden of proving that other features of the product do *not* affect demand.

not address other valuable features in *Fairchild's* products.” *Id.* (emphasis added).

But information about a competitor’s products is “peculiarly within the control of the opposing party.” *Professional Air Traffic Controllers Org.*, 685 F.2d at 578 & n.65. And, as this Court has observed, “[w]here the facts with regard to an issue lie peculiarly in the knowledge of a party,’ that party is best situated to bear the burden of proof.” *Smith*, 568 U.S. at 112 (citation omitted); see *Alaska Dep’t of Env’tl. Conservation v. EPA*, 540 U.S. 461, 494 n.17 (2004). The Federal Circuit’s decision seemingly requires Power Integrations to gather information about each feature of *Fairchild's products*, and the choices of *Fairchild's* customers, in order to bear its burden.

Such a regime also would create a “significant discovery burden” for plaintiffs and others. Stephen Akerley *et al.*, *Entire Market Value Rule Is Alive But Not Well*, Law360 (Oct. 1, 2018), <https://www.law360.com/articles/1087900/entire-market-value-rule-is-alive-but-not-well>. To attempt to “prov[e] that other features did not cause an infringer’s consumers to purchase the infringer’s product,” a plaintiff would: (1) “have to identify the infringer’s customers in discovery”; (2) “serve third party discovery on those customers to prove other features did not cause consumers to purchase the infringing product”; and (3) “convince a district court judge that the burden or expense of the proposed third party discovery did not outweigh its likely benefit.” *Id.* Needless to say, the last thing patent law needs is a new rule that will

drive up the cost of litigation and impose new burdens on third parties.<sup>8</sup>

2. Not even this Court’s own EMVR decisions could survive the Federal Circuit’s new rule. For example, in *Manufacturing Co. v. Cowing*, the Court held that the patentee was entitled to damages based on the defendant’s entire profits from an oil-well pump. 105 U.S. 253 (1882). The Court explained that the patent had improved upon normal pump technology, which could not be used for oil wells, thereby opening up an entirely new market. *Id.* at 256. Because the invention had created a new market, it concluded, all of defendant’s profits were attributable to the patent. *Id.*

In so holding, the Court did not inquire into whether other, unpatented features of the pump might also have contributed to the value of the pump, let alone suggest that the plaintiff was required to prove that negative. To the contrary, the Court acknowledged that the pump was made from “the well-known parts of an ordinary double-action pump,” to which the inventor merely added his new device. *Id.* at 255. Under the Federal Circuit’s new rule,

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<sup>8</sup> In faulting Power Integrations for not putting on evidence as to *Fairchild’s* products, the Federal Circuit also overlooked that Power Integrations presented ample evidence showing that *both* parties’ customers purchased controller chips because of the patented technology. Indeed, Fairchild and Power Integrations shared the same customers, and there was evidence that Fairchild’s customers expressly told Power Integrations that they were purchasing Fairchild products “solely based on the inclusion of the ’079 invention.” Power Integrations C.A. Fed. Br. 25 (quoting Appx1634 (518:10-13)). The fact that the Federal Circuit ignored this evidence underscores the unrealistic burden that the Federal Circuit has created.

however, the patentee would not be entitled to base its damages on the entire market value of the pump unless it could prove that no other feature of the pump caused consumers to purchase the product. In other words, even if the patented invention was responsible for opening up a new market, the presence of another valuable feature (and a defendant would surely argue that other features were valuable) could prevent a patentee from receiving full compensation.

The same goes for this Court's decision in *Hurlbut*. There, the plaintiff owned a patent for an improvement in concrete pavement for sidewalks. 130 U.S. at 469. The Court affirmed a damages award based on "the entire profits made by the defendant" for the laying of concrete flagging, because the concrete flagging "derived its entire value from the use of the plaintiff's invention." *Id.* at 471-72. Under the Federal Circuit's new test, however, a patentee would have to prove that the concrete itself (surely a valuable feature of concrete pavement generally) did *not* cause consumers to purchase the product.

Tellingly, even the Federal Circuit's own EMVR decisions would flunk the test adopted in this case. For example, in *Bose Corp. v. JBL, Inc.*, the Federal Circuit upheld a damages award based on the entire value of loudspeaker systems, where the patented component was an elliptical port tube that prevented audible distortion. 274 F.3d 1354, 1357 (Fed. Cir. 2001). The evidence showed that the patented technology "inextricably worked with other components of loudspeakers as a single functioning unit," the patent "improved the performance of the loudspeakers and contributed substantially to the increased demand for the products in which it was incorporated," and the patent "was integral to the

overall performance of [the] loudspeakers.” *Id.* at 1361. The patentee also presented evidence that it had marketed the benefits of its patented technology and had experienced an increase in sales in its own products in the year following introduction of the patented invention. *Id.* The court held that this evidence was sufficient to permit use of the EMVR.

Under the Federal Circuit’s new test, the evidence in *Bose* would be insufficient because the patentee did not prove that loudspeakers have no other valuable features (besides a port) that contribute to or affect consumer demand (such as the ability to create sound). The same goes for other decisions in which the Federal Circuit previously upheld the use of the EMVR to calculate patent damages. *See, e.g., Tec Air, Inc. v. Denso Mfg. Mich., Inc.*, 192 F.3d 1353, 1362 (Fed. Cir. 1999) (affirming a jury verdict based on the entire value of radiators and condensers, where the patent covered fans inside the machines, because the evidence showed that customers wanted the patented technology and after the infringer abandoned the technology, it received a customer complaint—but not requiring evidence that the radiators themselves or other features did not drive demand); *Fonar Corp. v. General Elec. Co.*, 107 F.3d 1543, 1552-53 (Fed. Cir. 1997) (affirming a damages award based on the entire market value of MRI machines where the patent covered an imaging method and evidence showed that the infringer’s technical literature emphasized the patented feature—but not requiring evidence that other features of the MRI machines, including other patented features, did not drive demand).

3. Virtually every multi-component product will have multiple features of value to consumers; if the features were not of some value to some consumers,

they presumably would not have been included in the first place. Thus, if the decision below is allowed to stand, a defendant will always be able to argue that other features have value and that the EMVR is thus inapplicable. Courts have always dealt with that in the past by requiring the plaintiff to prove that the *patented feature* created the basis for consumer demand for the specific infringing product. That is itself a difficult showing to make. Until the decision below, however, a plaintiff has never had to meet the added burden of proving that the other features do *not* contribute to or affect demand for the product. That new burden will make it virtually impossible to invoke the EMVR. The Federal Circuit's decision imposing it warrants this Court's review.

**B. This Case Illustrates The Stark Consequences Of The Federal Circuit's New Standard For Invoking The Entire Market Value Rule**

This case leaves no doubt about the outcome-determinative impact of the Federal Circuit's new test. Indeed, in many respects, if there were ever a case made for invoking the EMVR, this is it:

A two-week trial was held on damages alone; Power Integrations focused its presentation at trial on meeting the longstanding test for invoking the EMVR (*i.e.*, showing that the patented feature created the basis for consumer demand for the accused chips); the jury was properly instructed under longstanding law on what it needed to find to invoke the EMVR (and told when apportionment was required instead), *supra* at 10-11; and the jury issued a special verdict in which it explicitly found that “the ’079 patented feature create[s] the basis for customer demand for



the infringing Fairchild products (Entire Market Value Rule),” App. 64a. Yet the Federal Circuit set aside that jury verdict as a “matter of law” under its new test for invoking the EMVR. *Id.* at 26a.

Much of the trial focused on the impact of the patented technology on customer demand for the chips at issue, with Power Integrations seeking to show through testimony and documents that the patented feature drove demand and Fairchild seeking to show that other features had value that contributed to or affected demand. At the end of the day, the jury explicitly found that, even though the accused products had multiple features, the patented feature created the basis for customer demand.

Notably, the Federal Circuit did not hold (and could not have) that the evidence was insufficient to support the jury’s finding that the ’079 technology drove demand for the products. Instead, the court held that the evidence was “insufficient as a matter of law” because the evidence failed to satisfy the *new* legal standard it set forth—*i.e.*, the Federal Circuit set aside the jury’s verdict because Power Integrations did not show that “*other* features do *not* cause consumers to purchase the product.” App. 24a (emphases added); *see id.* at 22a (Power Integrations “presented no evidence about the effect of [other] features on consumer demand”); *id.* (“There is no proof that these [other] features, including jittering, did not affect consumer demand.”).

In short, there is no question that the Federal Circuit’s new standard was decisive in this case. And the Federal Circuit’s imposition of this test had the effect of invading the province of the jury to reach its damages verdict based on the evidence under the longstanding test for invoking the EMVR.

### **C. The Federal Circuit’s Decision Conflicts With This Court’s Rejection Of Rigid Rules In The Patent Context**

The Federal Circuit’s decision in this case also contravenes this Court’s recent guidance *against* the adoption of new, and more stringent, requirements for longstanding patent doctrines. For example, in *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, the Court explained that, after decades of applying a totality of the circumstances analysis for attorney’s fee determinations in patent cases, the Federal Circuit “abandoned that holistic, equitable approach in favor of a more rigid and mechanical formulation.” 572 U.S. 545, 550 (2014). The Court rejected that shift, holding that the framework the Federal Circuit had established was “unduly rigid” and “impermissibly encumber[ed] the statutory grant of discretion to district courts.” *Id.* at 553.

Similarly, in *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, this Court rejected the Federal Circuit’s two-part “*Seagate* test” for determining when a district court may grant enhanced damages pursuant to Section 284. 136 S. Ct. 1923, 1928 (2016). As in *Octane Fitness*, the Court found the Federal Circuit’s test “unduly rigid.” *Id.* at 1932 (quoting *Octane Fitness*, 572 U.S. at 553). It explained that district courts should instead “take into account the particular circumstances of each case in deciding whether to award damages, and in what amount,” “eschew[ing] any rigid formula for awarding enhanced damages.” *Id.* at 1933-34; *see also WesternGeco v. ION Geophysical Corp.*, 138 S. Ct. 2129, 2139 & n.3 (2018) (rejecting the Federal Circuit’s imposition of a bright-line rule against

recovery of lost foreign profits in favor of standard legal doctrines like proximate cause).

The Court’s instruction against “superimpos[ing] an inflexible framework onto statutory text that is inherently flexible,” *Octane Fitness*, 572 U.S. at 555, applies equally here. Section 284 provides that a patentee is entitled to damages “adequate to compensate for the infringement.” 35 U.S.C. § 284. The purpose of that provision is to ensure that the patentee is fully compensated for any damages he suffers. *See General Motors Corp.*, 461 U.S. at 654-55. As the Federal Circuit itself previously recognized, “[w]here a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device”—*i.e.*, where a plaintiff shows that the patented feature drives demand for the product—“the patentee should be compensated accordingly.” *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 901 (Fed. Cir. 1986).

At bottom, the Federal Circuit’s decision in this case commits the same fundamental errors as the Circuit’s decisions in *Octane* and *Halo*: it upends a century-old doctrine by imposing a new and unduly rigid test at odds with this Court’s precedent.

### III. THE QUESTION PRESENTED IS IMPORTANT AND WARRANTS REVIEW

This Court has frequently granted certiorari to review the principles governing the award of damages in patent cases. *See, e.g., WesternGeco LLC*, 138 S. Ct. 2129 (damages for foreign lost profits); *Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429 (2016) (relevant “article of manufacture” for damages award under Section 289 of the Patent Act); *Halo Elecs.*, 136 S. Ct. 1923 (enhanced damages under Section 284); *Octane*

*Fitness*, 572 U.S. 545 (attorney’s fees). That is not surprising. The principles governing patent damages not only impact the redress available to the victims of patent infringement but also the actual deterrence against infringement in the first place.

The question presented here is recurring and important. Parties frequently seek to invoke the EMVR in seeking damages for patent infringement, and the Federal Circuit and district courts have frequently confronted cases involving the EMVR.<sup>9</sup> As discussed, the Federal Circuit’s decision will drastically alter the requirement for invoking the EMVR as well as the nature of the evidence that must be discovered and presented in a damages trial, burdening not only the victims of infringement but third party customers as well. *See supra* at 23-24. And effectively eliminating the EMVR will deprive patent holders of full compensation for infringement even where they can show that the patented feature drove customer demand for the infringing products.

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<sup>9</sup> *See, e.g., VirnetX, Inc.*, 767 F.3d at 1326; *Ericsson, Inc.*, 773 F.3d at 1226; *LaserDynamics*, 694 F.3d at 67; *Versata Software, Inc.*, 717 F.3d at 1268; *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318-21 (Fed. Cir. 2011); *Lucent Techs., Inc.*, 580 F.3d at 1336-39; *Imonex Servs., Inc. v. W.H. Munzprufer Dietmar Trenner GMBH*, 408 F.3d 1374, 1380 (Fed. Cir. 2005); *Juicy Whip, Inc. v. Orange Bang, Inc.*, 382 F.3d 1367, 1371-72 (Fed. Cir. 2004); *Bose Corp.*, 274 F.3d at 1361; *Tec Air, Inc.*, 192 F.3d at 1362; *Fonar Corp.*, 107 F.3d at 1552; *Rite-Hite Corp.*, 56 F.3d at 1549; *Sonos, Inc. v. D&M Holdings Inc.*, 297 F. Supp. 3d 501, 515 (D. Del. 2017); *Trustees of Boston Univ. v. Everlight Elecs. Co.*, 141 F. Supp. 3d 139, 143 (D. Mass. 2015); *Veracode, Inc. v. Appthority, Inc.*, 137 F. Supp. 3d 17, 79-81 (D. Mass. 2015); *Sloan Valve Co. v. Zurn Indus., Inc.*, 33 F. Supp. 3d 984, 994 (N.D. Ill. 2014); *Universal Elecs., Inc. v. Universal Remote Control, Inc.*, 34 F. Supp. 3d 1061, 1093-94 (C.D. Cal. 2014).

This case, moreover, presents an ideal vehicle for resolving the proper standard for invoking the EMVR. Power Integrations proceeded entirely on an EMVR theory of damages at the second trial, its evidence was tailored to satisfy existing law for invoking the rule, and the jury returned a special verdict finding that the patented feature created the basis for customer demand. The EMVR issue was briefed by the parties below and passed upon, at length, by both the district court and the Federal Circuit. And the Federal Circuit invoked its new standard to throw out a jury's \$139.8 million damages award under the EMVR, forcing a third damages trial in this case.

This Court's intervention is warranted.

**CONCLUSION**

The petition for a writ of certiorari should be granted.

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December 19, 2018

## **APPENDIX**

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**UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

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**POWER INTEGRATIONS, INC.,**  
*Plaintiff-Appellee*

v.

**FAIRCHILD SEMICONDUCTOR  
INTERNATIONAL, INC., FAIRCHILD  
SEMICONDUCTOR CORPORATION,  
FAIRCHILD (TAIWAN) CORPORATION,**  
*Defendants-Appellants*

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2016-2691, 2017-1875

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Appeals from the United States District Court for  
the Northern District of California in No. 3:09-cv-  
05235-MMC, Judge Maxine M. Chesney.

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OPINION ISSUED: July 3, 2018  
OPINION MODIFIED: September 20, 2018\*

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904 F.3d 965

Before DYK, CLEVINGER, and CHEN, *Circuit  
Judges.*

DYK, *Circuit Judge.*

Power Integrations, Inc. owns U.S. Patent Nos.  
6,212,079 (“the ’079 patent”) and 6,538,908 (“the ’908

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\* This opinion has been modified and reissued following a  
petition for rehearing filed by Appellee.

patent”). Power Integrations sued Fairchild Semiconductor Corporation and Fairchild (Taiwan) Corporation (collectively “Fairchild”) for infringement. A jury found Fairchild literally infringed claims 31, 34, 38, and 42 of the ’079 patent and infringed claims 26 and 27 of the ’908 patent under the doctrine of equivalents. In a second trial, a jury awarded damages of roughly \$140 million, finding that the entire market value rule applied in calculating damages for infringement of the ’079 patent. The district court denied Fairchild’s motions for judgment as a matter of law. Fairchild appeals.

We affirm the district court’s judgments of infringement. We conclude that the entire market value rule cannot be used here to calculate damages. We vacate the damages award and remand for further proceedings.

## BACKGROUND

### I

Power Integrations and Fairchild are both manufacturers of power supply controller chips. Power supply controller chips are integrated circuits used in power supplies, such as chargers for electronic devices. These power supplies transform alternating current (“AC”) electricity, which comes from an AC outlet, into direct current (“DC”) electricity, which is needed to power cell phones, laptops, and other electronic devices.

After AC electricity has been converted to DC electricity, a switching regulator directs the transistor in the circuit when to turn on and off in order to provide the desired amount of power to the electronic device. The electronic device is referred to as the “DC output” because it receives the DC current. The

transistor turns on and off at defined intervals. For example, if there is a need for power at the DC output, the switching regulator will direct the transistor to stay “on” for a longer period of time so more power will flow to the DC output.

The controversy here involves the '079 and '908 patents owned by Power Integrations. The asserted claims of the '079 patent cover switching regulators. Prior-art switching regulators were inefficient during periods when the DC output required little power. During these low power periods, prior-art switching regulators would skip on/off cycles to decrease the DC power provided; the power remained off during the skipped cycle. However, skipping cycles created loud noise and delivered power in an intermittent fashion. The '079 patent addressed this problem by reducing the frequency of on/off cycles rather than by skipping cycles altogether. The frequency of on/off cycles is determined by feedback signals. Thus, the switching frequency varies based on the feedback signal. However, for a certain range of feedback signals, the frequency of the on/off cycles does not change. Each of the asserted claims requires a “fixed switching frequency for a first range of feedback signals.”

The '908 patent covers a “power supply controller,” which is an integrated circuit that can perform a variety of power-regulation functions. '908 pat., col. 1, ll. 32–33, 52–60. Each of the asserted claims requires a power supply controller comprising “a multi-function circuit coupled to receive a signal at a multi-function terminal for adjusting a current limit of a power switch.” *Id.*, col. 25, l. 63–col. 26, l. 14. The current limit is a value of current that can be used by the circuit to turn off the power switch when the

amount of current passing through the power switch reaches the threshold value.

## II

Power Integrations filed suit against Fairchild, alleging infringement of various claims of the '079 patent and the '908 patent.<sup>1</sup> In February and March 2014, the district court held a sixteen-day jury trial. The jury found Fairchild literally infringed claims 31, 34, 38, and 42 of the '079 patent and infringed claims 26 and 27 of the '908 patent under the doctrine of equivalents.<sup>2</sup> The jury awarded Power Integrations \$105 million in reasonable royalty damages. Fairchild sought judgment as a matter of law that it did not infringe claims of the '079 or '908 patents, or in the alternative a new trial, which the district court denied.

Six months after the jury verdict, and while the case was still pending in the district court, our court decided *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1329 (Fed. Cir. 2014), which concerned the general rule that a patentee seeking damages based

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<sup>1</sup> Fairchild counterclaimed for infringement of U.S. Patent No. 5,747,977. The jury found that Power Integrations did not infringe this patent, and the district court entered judgment consistent with the jury verdict. This aspect of the judgment has not been appealed.

<sup>2</sup> All of the asserted claims in this proceeding have been found unpatentable in two IPR proceedings. Those proceedings are currently pending on appeal to this court. See *Semiconductor Components Indus., LLC v. Power Integrations, Inc.*, IPR No. 2016-00809 (P.T.A.B. Dec. 22, 2017), appeal filed No. 18-1607 (Fed. Cir. Feb. 26, 2018); *Semiconductor Components Indus., LLC v. Power Integrations, Inc.*, IPR No. 2016-00995 (P.T.A.B. Dec. 21, 2017), appeal filed No. 18-1602 (Fed. Cir. Feb. 23, 2018).

on an infringing product with both patented and unpatented features must “apportion damages only to the patented features.” *VirnetX* explained that simply identifying the smallest salable unit is not necessarily sufficient to satisfy a patentee’s obligation to apportion for multi-component products with significant unpatented features. *Id.* Because Power Integrations’ royalty calculation in the first trial did not apportion beyond the “smallest salable unit” and Power Integrations had disclaimed reliance on the entire market value rule, the district court granted a new trial on the issue of damages in light of *VirnetX*.

The district court held a second damages trial in December 2015. The district court granted a *Daubert* motion to exclude Power Integrations’ expert testimony based on apportionment, but allowed its expert to present testimony based on the entire market value rule. The jury awarded \$139.8 million in damages, based on damages testimony that relied solely on the entire market value rule. Fairchild then moved for judgment as a matter of law, or in the alternative a new trial, arguing that the damages award was not supported by substantial evidence and that the use of the entire market value rule was improper. The district court denied this motion.

Fairchild now appeals the determination of literal infringement of the ’079 patent, the determination of infringement under doctrine of equivalents of the ’908 patent, and the damages award. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

## I

We first address infringement of the '079 patent. The key issue here is whether the accused products have a “fixed switching frequency for a first range of feedback signal values.”<sup>3</sup> On appeal, Fairchild does not dispute that the other claim limitations were satisfied. The jury found that all accused products

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<sup>3</sup> Claim 31, which is representative, reads in full:

31. A switching regulator, comprising: a power switch coupled between first and second terminals, the first terminal to be coupled to an energy transfer element of a power supply and the second terminal to be coupled to a supply rail of the power supply, and

a control circuit coupled to a third terminal and the power Switch, the third terminal to be coupled to an output of the power supply, the control circuit coupled to generate a feedback signal responsive to the output of the power supply, the control circuit coupled to switch the power switch in response to the feedback signal, the control circuit coupled to switch the power switch at a fixed switching frequency for a first range of feedback signal values, the control circuit coupled to vary a switching frequency of the power switch without skipping cycles in response to the feedback signal for a second range of feedback signal values, wherein the control circuit comprises:

a feedback signal circuit coupled to the third terminal, the feedback signal circuit coupled to generate the feedback signal; and

a pulse width modulator circuit coupled to switch the power switch in response to the feedback signal,

wherein the first and second ranges of the feedback signal correspond to first and second ranges of on-time values of a drive signal generated by the pulse width modulator circuit to switch the power switch.

'079 patent, Ex Parte Reexamination Certificate, col. 2, ll. 4–32.

infringed the asserted claims, and the district court denied judgment as a matter of law of no infringement. We review the denial of a motion for judgment as a matter of law de novo. We review a jury determination of infringement for substantial evidence.

In a *Markman* order, the district court construed “fixed switching frequency” to mean “[a] non-varying number of switching cycles per second.” J.A. 2142. On appeal, Fairchild disputes: (1) whether all accused products include a “fixed” switching frequency because the frequency varies due to operating conditions, and (2) whether a particular subset of accused products, known as “frequency-hopping” products, has a “fixed” frequency. This second issue turns primarily on claim construction—whether the district court properly construed “fixed frequency” to include a per second limitation. But Fairchild contends that even if the claim construction were correct, there was not substantial evidence to support the jury verdict.

Claim terms are given their ordinary and customary meaning, which is the meaning the term would have to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). We review claim construction de novo, except for subsidiary facts based on extrinsic evidence, which we review for clear error. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

A

Fairchild argues that the jury verdict is not supported by substantial evidence because none of the Fairchild products has a “fixed switching frequency”

according to the language of the claims or a “non-varying frequency” under the district court’s claim construction, because even during “fixed” frequency mode, the products operate with 5% to 15% variance in frequency. This variance is due to operating conditions, such as temperature and input voltage. The question is whether this variability renders the products non-infringing.

Fairchild argues that the term “fixed” under the district court’s construction of “non-varying number of switching cycles per second” requires an absolutely fixed frequency with no variance, even due to operating conditions. The district court, Fairchild asserts, rejected a construction of “fixed” frequency that permits natural variation when it rejected Power Integration’s proposed construction of “fixed switching frequency” as “the target switching frequency is intended to be substantially fixed.” J.A. 2125. Rather, the court adopted “fixed” as meaning “non-varying.” J.A. 2142.<sup>4</sup>

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<sup>4</sup> Fairchild also argues that the term “fixed” cannot include any variations due to operating conditions based on statements made by Power Integrations during the reexamination about a particular prior art reference, the Zhou reference. However, this argument is waived because Fairchild did not raise the prosecution history concerning the Zhou prior art as a claim construction argument before the district court. Moreover, the Zhou reference did not disclose holding frequency constant over a range of feedback signals but instead varied frequency over the entire range of operation. Therefore, the prosecution history statement describing Zhou as not containing a “fixed” frequency was not directed to determining whether the switching frequency has been fixed when environmental variations occur while holding a fixed frequency over a certain range of signals.



Fairchild's argument is unpersuasive. The district court's construction of "fixed switching frequency" as "non-varying" does not exclude the possibility of natural variation because doing so would impermissibly render the claims inoperable. See *Ecolabs, Inc. v. FMC Corp.*, 569 F.3d 1335, 1345 (Fed. Cir. 2009) (finding that where claim language permits an operable construction, the inoperable construction is wrong).<sup>5</sup> Here, the parties offered expert testimony to address the knowledge of persons of ordinary skill in the art. The expert testimony demonstrated that no real-world power supply controllers could operate with an absolutely fixed, or non-varying, frequency. Indeed, Fairchild seems to concede that there is always some variation in frequency due to operating conditions. Moreover, technical marketing documents from products sold by Fairchild, Power Integrations, and third parties label these controllers as "fixed frequency" products despite the undisputed, minor variations in frequency. Since the term "fixed" is not unambiguously defined in the claims, the fact that power supply controllers cannot operate without any variation supports that the plain and ordinary meaning of "fixed" encompasses minor environmental variations.

Thus, the jury could have properly concluded that the terms "fixed frequency" and "non-varying" left open the possibility for minor frequency variations due to operating conditions. A reasonable jury could have found that the accused products have a "fixed" or

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<sup>5</sup> This case is unlike that in *Chef America, Inc. v. Lamb-Weston, Inc.*, where the claims were unambiguously written in a manner that rendered them inoperable. 359 F.3d 1371, 1374 (Fed. Cir. 2004).

“non-varying” frequency despite slight variance due to operating conditions.

B

Fairchild alternatively argues that there was no basis for finding that the “fixed” frequency limitation was satisfied for a subset of the accused products because the Fairchild “frequency-hopping” products intentionally vary frequency in order to reduce electromagnetic interference. The intentional varying of frequency is referred to as “jittering.” For example, one Fairchild frequency-hopping product jittered its switching frequency from 62 kilohertz to 68 kilohertz, around a center frequency of 65 kilohertz. Even though the frequency varies in any given microsecond interval, the average number of cycles per second is 65,000.

On appeal, Fairchild argues that the district court erred in construing “fixed switching frequency” as a “non-varying number of switching cycles per second” rather than looking to overall variation.

The district court construed claim terms in a series of *Markman* orders in 2011 and 2012—two years before trial. Power Integrations proposed that “fixed switching frequency” be construed to mean “the target switching frequency is intended to be substantially fixed; but does not preclude the presence of a frequency jittering circuit.” J.A. 2125. Fairchild proposed that: “the switching frequency does not vary.” *Id.* The district court then construed the term to mean a “non-varying number of switching cycles per second,” even though neither party requested the “per second” limitation. J.A. 2142.

Although Fairchild later proposed further construction for other claim terms, Fairchild never

objected to the “per second” construction and did not seek rehearing or supplemental construction. At trial, Fairchild did not object to the district court’s instructing the jury using the “per second” language. Even in its post-trial motion, Fairchild did not argue that the court’s construction was incorrect. The claim construction issue is argued for the first time on appeal.

Power Integrations argues that because Fairchild did not seek additional claim construction at the district court and chose to litigate this issue as a factual dispute about infringement, Fairchild has waived its “per second” claim construction argument. Fairchild responds that it did not waive its claim construction argument because the claim construction it proposes now is the same as the claim construction it proposed during the *Markman* hearing, which did not contain the “per second” limitation.

We have held that a party does not waive a claim construction argument by failing to object during trial when the construction proposed on appeal is the same as the construction proposed in a *Markman* hearing. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1359 (Fed. Cir. 2008); *see also D’Agostino v. Mastercard Int’l Inc.*, 844 F.3d 945, 950 (Fed. Cir. 2016); *In re Pabst Licensing Dig. Camera Patent Litig.*, 778 F.3d 1255, 1266 (Fed. Cir. 2015). “When the claim construction is resolved pre-trial, and the patentee presented the same position in the *Markman* proceeding as is now pressed, a further objection to the district court’s pre-trial ruling may indeed have been not only futile, but unnecessary.” *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 381 F.3d 1371, 1381 (Fed. Cir. 2004). However, this rule

only applies when “issues were fully litigated and decided at the *Markman* stage of the litigation.” *O2 Micro*, 521 F.3d at 1359.

The problem for Fairchild is that the issue of the appropriate time interval over which to measure frequency was not fully litigated—or even raised as an issue in dispute—at the *Markman* stage of this proceeding. During the *Markman* proceedings, there was no dispute about the time interval. Neither Fairchild nor Power Integrations proposed a construction with the “per second” limitation. The district court added this limitation to the construction on its own without providing a clear explanation. Because the district court had not specifically addressed this issue in its claim construction order, in order to preserve an objection to the district court’s claim construction, Fairchild was required to raise the issue before submission to the jury. Yet even when this dispute arose at trial, Fairchild did not ask the district court to modify or clarify its claim construction with regard to “per second,” nor did it object to the jury instructions. Instead, Fairchild waited until this appeal to argue that the district court’s claim construction was erroneous.

It is well-settled that a party cannot reserve a new claim-construction argument for the post-trial motion stage of litigation. *Lazare Kaplan Int’l, Inc. v. Photoscribe Techs., Inc.*, 628 F.3d 1359, 1376 (Fed. Cir. 2010); *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 694 (Fed. Cir. 2008); *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1320 (Fed. Cir. 2003).

The present situation is similar to *Solvay S.A. v. Honeywell International, Inc.*, 742 F.3d 998 (Fed. Cir. 2014). In that case, the district court construed a

claim term “isolating” to require removing two chemicals, HFC-245fa and HCl, from a chemical reaction. *Id.* at 1003. During claim construction, the parties did not raise and the district court did not address the issue of whether the two chemicals could return to the reactor after initially being removed. *Id.* at 1003–04. However, during the trial, a disagreement arose between the parties as to whether the chemicals had to be permanently removed. The parties argued the issue at trial, and the district court allowed jury instructions that did not necessarily require permanent removal. *Id.* at 1004. When the patentee argued on appeal that the proper claim construction required the chemicals to be permanently removed, we held that “[b]ecause [the patentee] failed to object to the court’s construction or jury instruction with respect to the term ‘isolating,’ it waived the issue and cannot now raise novel arguments to redefine the scope of [the] claim.” *Id.* In particular, we noted that the patentee “did not ask the district court to modify the claim construction or accompanying jury instruction.” *Id.* By failing either to request that the district court modify or clarify its claim construction earlier in the litigation proceedings or to object to the jury instructions, Fairchild has waived this new claim-construction argument.

Because Fairchild has waived its “per second” claim-construction objection, we only review whether substantial evidence supported the jury verdict under the court’s construction. *See Lazare*, 628 F.3d at 1376; *Hewlett-Packard*, 340 F.3d at 1320. Power Integrations’ expert, Dr. Kelley, testified that the accused products operate with a non-varying number of cycles per second for a range of operation. Dr.

Kelley testified that the frequency-hopping products meet the limitation of a “non-varying number of switching cycles *per second*” because even though the frequency varies over microsecond intervals, the aggregate number of pulses would not vary over each one-second interval. Based on this testimony, a reasonable jury could have concluded that the accused products operate with a “fixed switching frequency” for a certain range of feedback signals under the district court’s construction. Thus, substantial evidence supports the jury’s verdict of infringement of the ’079 patent for all of the accused products.

## II

Next, we address infringement of the ’908 patent under the doctrine of equivalents. The ’908 patent is directed towards a power supply controller, where an integrated circuit can perform multiple functions within a single terminal. Claim 26 requires:

26. A power supply controller circuit, comprising:

a multi-function circuit coupled to receive a signal at a multi-function terminal for adjusting a current limit of a power switch, the multi-function circuit to generate a current limit adjustment signal in response to the signal; and

a control circuit coupled to receive the current limit adjustment signal, the control circuit coupled to adjust the current limit of a current through the power switch in response to the current limit adjustment signal.

'908 patent, col. 25 l. 63–col. 26, l. 7 (emphasis added). Claim 27, the only other asserted claim, depends from claim 26.

The dispute focuses on the “current limit” term. There is no dispute about claim construction. The district court construed “current limit” as “a value of current that can be used by the control circuit to turn off the power switch when the amount of current passing through the power switch reaches the threshold.” J.A. 2155.

The accused products use a value of voltage, rather than a value of current, as the signal to implement the current limit, so there could not be literal infringement of this limitation. Fairchild moved in limine to preclude Power Integrations from arguing infringement under the doctrine of equivalents based on prosecution-history estoppel. Fairchild argued that prosecution-history estoppel existed because during prosecution of a related patent, Power Integrations explicitly distinguished voltage from current and therefore could not now assert voltage as an equivalent. The district court denied the motion in limine because the prosecution history was for a different term in a different patent, allowing Power Integrations to argue voltage as an equivalent for monitoring current.

At trial, Power Integrations' expert testified that a value of voltage qualifies as a “value of current” because under Ohm's Law, current is equal to voltage divided by resistance. J.A. 572–73, 901. The jury then found infringement under the doctrine of equivalents, and the district court denied judgment as a matter of law. On appeal, Fairchild argues that Power Integrations' equivalents theory is barred by prosecution-history estoppel.

Prosecution-history estoppel limits the application of the doctrine of equivalents. If a patentee surrenders certain subject matter during prosecution, the patentee is then barred from using the doctrine of equivalents to recover for infringement based on that same subject matter. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733–34 (2002). Prosecution-history estoppel can occur either when the patentee makes a narrowing amendment to the claim or surrenders claim scope through argument to the patent examiner. *Conoco, Inc. v. Energy & Envtl. Int’l, L.C.*, 460 F.3d 1349, 1363 (Fed. Cir. 2006). Here there was no claim amendment, so Fairchild relies on argument-based estoppel. To invoke argument-based estoppel, the prosecution history must evince a “clear and unmistakable surrender of the subject matter.” *Id.* at 1364. The application of prosecution-history estoppel is a question of law that we review de novo. *Intendis GMBH v. Glenmark Pharm. Inc., USA*, 822 F.3d 1355, 1365 (Fed. Cir. 2016).

Fairchild argues for argument-based estoppel based on a statement that Power Integrations made during prosecution of U.S. Patent No. 6,462,971 (“the ’971 patent”), which is the parent to the ’908 patent and shares a specification. The relevant claim of the ’971 patent is directed to:

[a] power supply controller circuit, comprising a current input circuit coupled to receive a current representative of an input voltage, the current in-put circuit to generate an enable/disable signal when the current crosses a threshold having a hysteresis of greater than or equal to zero, the power supply controller to activate and deactivate the power supply in response to the enable/disable signal.



'971 pat., col. 23, ll. 30–36 (emphasis added).

The examiner rejected the claims based on the Agiman reference. In an effort to overcome the rejection, Power Integrations argued that “Agiman’s circuit monitors *voltage* rather than current.” J.A. 2283 (emphasis in original). Power Integrations then urged that “Agiman fails to disclose . . . a *current* input circuit coupled to receive a *current* representative of an input voltage, the current input circuit to generate an enable/disable signal when the *current* crosses a threshold.” *Id.* (emphases in original). Fairchild argues that this distinction also applies to the “current limit” term of the '908 patent.

To determine whether prosecution-history estoppel applies, “the relevant inquiry is whether a competitor would reasonably believe that the applicant surrendered the relevant subject matter.” *Conoco*, 460 F.3d at 1364 (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998), *abrogated on other grounds by Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335 (Fed. Cir. 2015)). When considering the prosecution history of a parent application to construe claim terms, we consider differences in the language and context of different claims. *See Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1027 (Fed. Cir. 1997) (“[S]tatements in the parent application must be confined to their proper context and properly acknowledge the distinctions between . . . [the] claims.”).

Here, the claim language on its face is different than the language of the claims to which the prosecution argument was directed. Claim 26 of the '908 patent covers “a multi-function circuit coupled to receive a signal at a multi-function terminal for adjusting a current limit of a power switch, the multi-

function circuit to generate a current limit adjustment signal in response to the signal.” ’908 pat., col. 25 l. 63–col. 26, l. 7 (emphasis added). The current limit in the ’908 patent is externally adjustable and helps prevent a power switch from overloading due to excessive current flow. The ’971 patent, on the other hand, claims a “current input circuit coupled to receive a current representative of an input voltage, the current input circuit to generate an enable/disable signal when the current crosses a threshold.” ’971 pat., col. 23, ll. 30–33 (emphasis added). The functions performed in the two patents are related but different. The ’908 patent claims receiving a signal to *adjust* the current limit, which in turn determines when to turn the power supply on and off. The ’971 patent claims receiving a signal that directly turns the power supply on and off. Importantly, the claim in the ’971 patent specifically distinguishes voltage from current, claiming “a current representative of an input voltage.” The ’908 claim, in contrast, does not distinguish between current and voltage within the claim. It merely describes a “signal” to adjust the current limit.

On appeal, Fairchild provides only a cursory argument of why the statement in the ’971 patent prosecution history should apply the embodiments claimed in the ’908 patent. Fairchild failed to establish that the prosecution history is sufficiently clear as to create an estoppel. We conclude that the district court correctly determined that prosecution-history estoppel does not apply, and affirm the finding of infringement as to the asserted claims of the ’908 patent.

## III

Lastly, we address damages. The jury awarded Power Integrations \$139.8 million in the form of a reasonable royalty. The jury's reasonable royalty covered the three types of losses Power Integrations' damages expert Dr. Putnam testified the parties would anticipate during a hypothetical negotiation: lost sales, reduction in price due to competition, and lost licensing fees. The district court denied Fairchild's motion for judgment as a matter of law or in the alternative a new trial with respect to damages. We agree with Fairchild that the district court should have granted the new trial motion.

A patentee is only entitled to a reasonable royalty attributable to the infringing features. The patentee "must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features." *Garretson v. Clark*, 111 U.S. 120, 121 (1884). In accordance with *Garretson*, we have required that royalties be apportioned between the infringing and non-infringing features of the product. *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226–27 (Fed. Cir. 2014); *VirnetX*, 767 F.3d at 1326; *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336–37 (Fed. Cir. 2009). "As a substantive matter, it is the 'value of what was taken' that measures a 'reasonable royalty' under 35 U.S.C. § 284." *Ericsson*, 773 F.3d at 1226 (quoting *Dowagiac Mfg. v. Minn. Moline Plow Co.*, 235 U.S. 641, 648 (1915)). And in the context of a utility patent, it is only the patented technology that is taken from the owner, so the value to be determined is only

the value that the infringing features contribute to the value of an accused product. *Id.*

Undertaking an apportionment analysis where reasonable royalties are sought generally requires a determination of the royalty base to which the royalty rate will be applied. We have articulated that, where multi-component products are accused of infringement, the royalty base should not be larger than the smallest salable unit embodying the patented invention. We have cautioned against reliance on use of the entire market value of a multi-component product that includes a patented component because it “cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue.” *Uniloc*, 632 F.3d at 1320. “Where small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product.” *LaserDynamics*, 694 F.3d at 67. Admission of evidence of the entire market value “only serve[s] 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.’” *Id.* at 68 (quoting 35 U.S.C. § 284). Even when a damages theory relies on the smallest salable unit as the basis for calculating the royalty, the patentee must estimate what portion of that smallest salable unit is attributable to the patented technology when the smallest salable unit itself contains several non-infringing features. *VirnetX*, 767 F.3d at 1327.

The damages verdict here rests on Power Integrations' reliance on a demanding alternative to our general rule of apportionment, the entire market value rule. *Id.* "The entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for consumer demand." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336 (Fed. Cir. 2009); *see also Rite-Hite Corp. v. Kelley Co.*, 36 F.3d 1538, 1549 (Fed. Cir. 1995) (en banc). As we have explained, "[t]he law requires patentees to apportion the royalty down to a reasonable estimate of the value of its claimed technology," unless it can "establish that its patented technology drove demand for the entire product." *VirnetX*, 767 F.3d at 1329. "[S]trict requirements limiting the entire market value exception ensure that a reasonable royalty 'does not overreach and encompass components not covered by the patent.'" *Id.* at 1326 (quoting *LaserDynamics*, 694 F.3d at 70).

If the product has other valuable features that also contribute to driving consumer demand—patented or unpatented—then the damages for patent infringement must be apportioned to reflect only the value of the patented feature. This is so whenever the claimed feature does not define the entirety of the commercial product. In some circumstances, for example, where the other features are simply generic and/or conventional and hence of little distinguishing character, such as the color of a particular product, it may be appropriate to use the entire value of the product because the patented feature accounts for almost all of the value of the product as a whole. *See AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1338–40 (Fed. Cir. 2015).

Power Integrations' royalty rate is premised on the '079 patent's frequency reduction feature as driving consumer demand for Fairchild's controller chips. To support this contention, Power Integrations provided evidence that the '079 patented frequency reduction feature was essential to many customers, as it allowed the products to meet the federal government's Energy Star program. In addition, Power Integrations provided evidence that some customers asked for the '079 feature, that products with the '079 feature outsold other products, and that technical marketing materials promoted the '079 feature. Both parties, however, agreed that the accused products contained other valuable features as well. Power Integrations presented no evidence about the effect of those features on consumer demand or the extent to which those features were responsible for the products' value. Power Integrations did not seek a separate jury determination as to damages for infringement of the asserted claims of the '908 patent, and it is clear that the jury calculated damages only for the '079 patent.

In its JMOL motion, Fairchild argued that the evidence presented by Power Integrations was insufficient as a matter of law to invoke the entire market value rule, pointing to our decision in *LaserDynamics*. The district court noted that three prior cases relied on evidence that "*LaserDynamics* . . . arguably would find inadequate to support EMVR," and that the evidence presented by Power Integrations was comparable to the evidence in the prior cases. J.A. 26; see *Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1361 (Fed. Cir. 2001); *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1362 (Fed. Cir. 1999);

*Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1552–53 (Fed. Cir. 1997).

Despite the district court’s suggestion to the contrary, there is no conflict between *LaserDynamics* and these earlier cases, and subsequent cases have relied on *LaserDynamics*. See *VirnetX*, 767 F.3d at 1326–27; *Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1301–02 (Fed. Cir. 2015); *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1268 (Fed. Cir. 2013). *LaserDynamics* discussed how a patentee can prove that a patented feature forms the basis for consumer demand in the context of multi-component products. There we explained that “[i]t is not enough to merely show that the [patented feature] is viewed as valuable, important, or even essential to the use of the [infringing product].” *LaserDynamics*, 694 F.3d at 68. Moreover, “proof that consumers . . . choose the [infringing product] having the [patented] functionality says nothing as to whether the presence of that functionality is what motivates customers to buy [an infringing product] in the first place.” *Id.* None of the earlier cases that the district court cited discussed other valuable features that made the application of the entire market value rule inappropriate. See *Bose*, 274 F.3d at 1361; *Tec Air*, 192 F.3d at 1362; *Fonar*, 107 F.3d at 1552–53. These cases merely considered whether a patented feature formed the basis for consumer demand and do not conflict with the legal test articulated in *LaserDynamics*, which is binding.

As *LaserDynamics*, *Versata*, and *VirnetX* held, the entire market value rule is appropriate only when the patented feature is the sole driver of customer demand or substantially creates the value of the

component parts. *LaserDynamics*, 694 F.3d at 67; *Versata*, 717 F.3d at 1268; *VirnetX*, 767 F.3d at 1326. The burden of proof in this respect is on the patent holder. *LaserDynamics*, 694 F.3d at 67. The question is whether the accused product, compared to other products in the same field, has features that would cause consumers to purchase the products beyond the patented feature, i.e., valuable features. Where the accused infringer presents evidence that its accused product has other valuable features beyond the patented feature, the patent holder must establish that these features do not cause consumers to purchase the product. A patentee may do this by showing that the patented feature “alone motivates customers to purchase [the infringing product]” in the first place. *See id.* at 69. But when the product contains multiple valuable features, it is not enough to merely show that the patented feature is viewed as essential, that a product would not be commercially viable without the patented feature, or that consumers would not purchase the product without the patented feature. *Id.* at 68. When the product contains other valuable features, the patentee must prove that those other features do not cause consumers to purchase the product.

Here, the power supply controllers had other valuable features, such as jittering. The district court noted that “there is evidence in the record that other features are important and are highlighted by the respective parties” and that “there is no question that . . . there are other valuable features.”<sup>6</sup> J.A. 1764. In

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<sup>6</sup> Moreover, in an order denying a permanent injunction, the district court noted that the circuits “contain numerous features aside from the patented features.” J.A. 2293.



fact, Power Integrations sought infringement damages from Fairchild on the jittering feature in these same products in a separate lawsuit based on different patents, and we affirmed the judgment of infringement. See *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 843 F.3d 1315 (Fed. Cir. 2016). Moreover, many of Fairchild's technical marketing documents specifically mention the jittering feature and other features in addition to the '079 patented feature. There is no proof that these features, including jittering, did not affect consumer demand. Without such proof, Power Integrations did not meet its burden to show that the patented feature was the sole driver of consumer demand, i.e., that it alone motivated consumers to buy the accused products.<sup>7</sup>

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<sup>7</sup> Power Integrations provided testimony that the patented feature drove demand for the purchase of some products. This evidence almost entirely concerned Power Integrations' own products, TOPSwitch-Fx and TOPSwitch-Gx, not Fairchild's. Power Integrations contends that the only difference between the older TOPSwitch-Fx and the newer TOPSwitch-Gx controller chips is the frequency reduction feature covered by the '079 patent, and that the frequency reduction feature was the reason why its customers would buy the Gx product over the Fx product. We, however, explained in *LaserDynamics* that such a comparator, without more, is not enough to prove that the frequency reduction feature alone drives consumer demand for power supply controller chips. 694 F.3d at 68 ("Put another way, if given a choice between two otherwise equivalent laptop computers, only one of which practices optical disc discrimination, proof that consumers would choose the laptop computer having the disc discrimination functionality says nothing as to whether the presence of that functionality is what motivates consumers to buy a laptop computer in the first place. It is this latter and higher degree of proof that must exist to support an entire market value rule

Because the evidence presented by Power Integrations was insufficient as a matter of law to invoke the entire market value rule, we vacate the award of damages and remand for a new trial. In light of this disposition, we need not address Fairchild's other arguments about the sufficiency of the reasonable-royalty evidence.

CONCLUSION

We affirm the judgment of infringement of the asserted claims of the '079 and the '908 patents. We vacate the damages award and remand for further proceedings consistent with this opinion.

**AFFIRMED-IN-PART, VACATED-IN-PART,  
REMANDED**

COSTS

Costs to neither party.

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theory.”). Moreover, this evidence does not address the other valuable features in Fairchild's products.

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF  
CALIFORNIA

POWER INTEGRATIONS,  
INC., a Delaware  
corporation,

Plaintiff,

v.

No. CV-09-5235-  
MMC

**JUDGMENT IN A  
CIVIL CASE**

FAIRCHILD  
SEMICONDUCTOR  
INTERNATIONAL, INC.,  
a Delaware corporation,  
FAIRCHILD  
SEMICONDUCTOR  
CORPORATION, a  
Delaware corporation, and  
FAIRCHILD (TAIWAN)  
CORPORATION, a  
Taiwanese corporation

Defendants.

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**(X) Jury Verdict.** This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.

**IT IS SO ORDERED AND ADJUDGED**

Power Integrations has proved it is entitled to as a reasonable royalty for infringement through March 4, 2014 in the amount of \$139,800,000.00.

The jury further finds that in arriving at the above figure, the '079 patented feature created the basis for

28a

customer demand for the infringing Fairchild products (Entire Market Value Rule).

Dated: December 18, 2015 Susan Y. Soong, Clerk

s/ Tracy Lucero

By: Tracy Lucero

Deputy Clerk

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF  
CALIFORNIA

POWER  
INTEGRATIONS, INC.,  
Plaintiff,

v.

FAIRCHILD  
SEMICONDUCTOR  
INTERNATIONAL,  
INC., et al.,  
Defendants.

Case No. 09-cv-05235-  
MMC

**ORDER DENYING  
DEFENDANTS'  
RENEWED MOTION  
FOR JUDGMENT AS  
A MATTER OF LAW,  
NEW TRIAL,  
AND/OR  
REMITTITUR;  
GRANTING IN  
PART AND  
DENYING IN PART  
PLAINTIFF'S  
MOTION FOR  
PREJUDGMENT  
INTEREST**

Dkt. Nos. 954, 955

Before the Court are the following two motions:  
(1) "Renewed Motion for Judgment as a Matter of Law [("JMOL")], New Trial, and/or Remittitur Pursuant to Federal Rules of Civil Procedure 50 and 59," filed February 12, 2016, by defendants Fairchild Semiconductor International, Inc., Fairchild Semiconductor Corporation, and Fairchild (Taiwan) Corporation (collectively, "Fairchild"); and

(2) “Renewed Motion for Prejudgment Interest,” filed February 12, 2016, by plaintiff Power Integrations, Inc. (“PI”). The motions, which have been fully briefed, came on regularly for hearing on June 17, 2016. Frank E. Scherkenbach, Howard G. Pollack, and Michael R. Headley of Fish & Richardson P.C. appeared on behalf of PI. Blair M. Jacobs, Christina A. Ondrick, and Patrick Stafford of Paul Hastings LLP appeared on behalf of Fairchild. Having considered the parties’ respective written submissions and the arguments of counsel at the hearing, the Court rules as follows.

### **BACKGROUND**

PI and Fairchild are manufacturers of power supply controller chips and compete in the same market. Power supply controller chips are integrated circuits used in power supplies, i.e., chargers, for cellular phones, computers, and other electronic devices. On November 4, 2009, PI filed the above-titled action against Fairchild and System General Corporation (“SG”),<sup>1</sup> asserting claims for infringement of U.S. Patent Nos. 6,538,908 (“908 Patent”) and 6,212,079 (“079 Patent”), and, on May 5, 2010, Fairchild and SG counterclaimed for infringement of U.S. Patent No. 5,747,977 (“977 Patent”).<sup>2</sup> All of the patents-in-suit pertain to

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<sup>1</sup> In the Complaint, PI alleges SG committed the initial acts of infringement. In 2007, SG was acquired by Fairchild, and, in 2014, the caption of the Complaint was amended to remove SG as a defendant.

<sup>2</sup> Initially, PI asserted a claim for infringement of U.S. Patent No. 6,351,398 (“398 Patent”), and Fairchild counterclaimed for infringement of U.S. Patent Nos. 7,257,008 (“008 Patent”) and 8,179,700 (“700 Patent”). Prior to trial, the parties withdrew their respective claims as to the ‘398 and ‘008

methods and apparatuses used in power supplies; the ‘908 Patent describes a multi-function pin, and the ‘079 and ‘977 Patents describe methods for increasing the efficiency of a power supply in standby mode.

In February and March 2014, the Court presided over a sixteen-day trial, in which the jury found Fairchild had infringed PI’s ‘908 and ‘079 Patents, and found PI had not infringed Fairchild’s ‘977 Patent. The jury awarded PI \$105 million in damages, based on the opinion of its damages expert Jonathan Putnam, Ph.D. (“Dr. Putnam”) that such amount constituted a reasonable royalty.

Thereafter, on November 25, 2014, Fairchild moved for a new trial on the issue of damages, in light of VirnetX, Inc. v. Cisco Sys., Inc., 767 F.3d 1308 (Fed. Cir. 2014), which decision was issued six months after the jury rendered the above verdict. VirnetX concerned the general rule that a patentee seeking damages based on an infringing product containing both patented and unpatented features must “apportion damages only to the patented features.” See id. at 1329. In particular, VirnetX clarified that the “obligation to apportion damages only to the patented features does not end with the identification of the smallest salable unit if that unit still contains significant unpatented features.” Id. As Dr. Putnam had acknowledged that his royalty calculation did not apportion beyond the “smallest salable unit,” and PI had disclaimed reliance on the entire market value rule (“EMVR”), the sole

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Patents, and the Court granted summary judgment in favor of PI on Fairchild’s claim for infringement of the ‘700 Patent.

exception to the apportionment requirement,<sup>3</sup> the Court granted a new trial on the issue of damages. (See Order, filed Nov. 25, 2014.) The parties' experts were afforded the opportunity to offer new damages opinions in light of VirnetX.

Subsequently, on a motion brought by Fairchild pursuant to Daubert v. Merrell Dow Pharm., 509 U.S. 579 (1993), the Court excluded the expert opinion of Dr. Putnam to the extent it purported to apportion damages to the patented features of Fairchild's products, finding Dr. Putnam had not conducted a proper apportionment. (See Order, filed Oct. 8, 2015.) The Court, however, allowed PI to proceed on an alternative royalty theory, in which Dr. Putnam, in reliance on EMVR, did not endeavor to apply principles of apportionment and instead calculated damages based on the entire value of the infringing products.

In December 2015, the Court held a nine-day re-trial on the issue of damages, during the course of which Dr. Putnam presented his damages theory. In particular, Dr. Putnam opined that at a hypothetical negotiation occurring in 2003, the parties would have considered various types of losses PI would have suffered if Fairchild were permitted to infringe without obtaining a license, and further opined that the parties would have arrived at a royalty designed to offset such losses. In that regard, Dr. Putnam testified that the parties would have anticipated the

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<sup>3</sup> As discussed below, EMVR allows a patentee to "assess damages based on the entire market value of the accused product . . . where the patented feature creates the basis for customer demand." VirnetX, 767 F.3d at 1326 (emphasis omitted).



following three categories of losses PI would sustain due to Fairchild's infringement: (1) a \$75.8 million loss in sales PI otherwise would have made in the absence of Fairchild's sales (see Trial Tr. at 1203:10-21) (hereinafter, "lost sales"); (2) a \$16.9 million loss, due to a reduction in the price at which PI could sell its units, given Fairchild's infringing sales at lower prices (see id. at 1203:25-1204:8) (hereinafter, "price erosion"); and (3) a \$47.1 million loss, representing PI's lost opportunity to charge a licensing fee on Fairchild sales PI would not have made but which Fairchild made using PI's patented technology (see id. at 1204:9-23) (hereinafter, "fee for infringing use"). Taking the sum of those three categories, Dr. Putnam determined PI's anticipated losses would total \$139.8 million. (See id. at 1204:24-1205:2.) The jury awarded PI damages in the amount of \$139.8 million, again accepting Dr. Putnam's opinion as to a reasonable royalty.

By the instant motion, Fairchild now seeks judgment in its favor, or, in the alternative, a new trial, on the grounds that said award was not supported by the evidence in the record and was based on an improper method of calculation. PI, by its motion, seeks an award of prejudgment interest in the amount of \$39,115,455.

## **LEGAL STANDARD**

### **A. Motion for Judgment as a Matter of Law**

A court properly grants "a renewed motion for judgment as a matter of law . . . if the evidence, construed in the light most favorable to the nonmoving party, permits only one reasonable conclusion, and that conclusion is contrary to the jury's verdict." Pavao v. Pagay, 307 F.3d 915, 918

(9th Cir. 2002). “A jury’s verdict must be upheld,” however, “if it is supported by substantial evidence.” Id. Substantial evidence is “evidence adequate to support the jury’s conclusion, even if it is also possible to draw a contrary conclusion.” Id. Although, in deciding a motion for JMOL, the court “review[s] the record as a whole, it must disregard evidence favorable to the moving party that the jury is not required to believe, and may not substitute its view of the evidence for that of the jury.” Johnson v. Paradise Valley Unified Sch. Dist., 251 F.3d 1222, 1227 (9th Cir. 2001) (internal quotations and citations omitted).

#### **B. Motion for New Trial**

“The trial court may grant a new trial, even though the verdict is supported by substantial evidence, if the verdict is contrary to the clear weight of the evidence, or is based upon evidence which is false, or to prevent, in the sound discretion of the trial judge, a miscarriage of justice.” Hanson v. Shell Oil Co., 541 F.2d 1352, 1359 (9th Cir. 1976) (internal quotation and citation omitted). In determining whether to grant a new trial, the court “need not view the evidence from the perspective most favorable to the prevailing party.” Landes Constr. Co. v. Royal Bank of Canada, 833 F.2d 1365, 1371 (9th Cir. 1987). Although “a decent respect for the collective wisdom of the jury . . . suggests that in most cases the judge should accept the findings of the jury regardless of his own doubts in the matter,” a new trial should be granted “[i]f, having given full respect to the jury’s findings, the judge . . . is left with the definite and firm conviction that a mistake has been committed.”

Id. at 1371-72 (internal quotation and citation omitted).

## DISCUSSION

### A. Fairchild's Motion for Judgment as a Matter of Law

Where a defendant is found liable on a claim of patent infringement, “the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.” See 35 U.S.C. § 284. “Two alternative categories of infringement compensation are the patentee’s lost profits and the reasonable royalty he would have received through arms-length bargaining.” Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009). The most common means of calculating a reasonable royalty is based on a “hypothetical negotiation” between the parties, which method “assumes the asserted patent claims are valid and infringed,” and “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” See id. at 1324, 1325.

#### 1. Sufficiency of the Evidence in Support of the Jury's Finding that PI is Entitled to a Royalty Based on the Entire Market Value of Fairchild's Infringing Products

As noted, a patentee ordinarily may “seek only those damages attributable to the infringing features,” and may instead invoke EMVR and “assess damages based on the entire market value for the accused product *only where* the patented feature creates the basis for customer demand” for said

product. VirnetX, 767 F.3d at 1326 (internal quotation and citation omitted) (emphasis in original). As a result, “it is the exception, not the rule, that damages may be based upon the value of the multi-component product,” and “[i]n the absence of . . . a showing” by the patentee that “the patented feature creates the basis for customer demand[,] . . . principles of apportionment apply.” Id. (internal quotation and citation omitted).

**a. Sufficiency of the Evidence in Support  
of the Jury’s Finding that the ‘079  
Feature is the Basis for Customer  
Demand**

**(1) Sufficiency of PI’s Evidence**

Fairchild first argues it is entitled to JMOL because, although PI’s damages theory relied on EMVR, PI failed to offer sufficient evidence to prove that either the ‘908 or the ‘079 patented features created the basis for customer demand for Fairchild’s products. In response, PI, as set forth below, points out the evidence supporting its position that the ‘079 feature<sup>4</sup> constituted the basis for customer demand for the infringing products.

First, it is undisputed that the ‘079 patented feature “reduce[s] the power consumption” and “improve[s] the efficiency” of power supply controller chips (see Trial Tr. at 1480:19-20), and PI’s witnesses offered testimony that customers in the market for such chips considered that feature to be essential (see id. at 325:24-25 (PI’s Chief Executive Officer (“CEO”)

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<sup>4</sup> PI did not attempt to show that the feature covered by the ‘908 Patent constituted the basis for customer demand for the accused products.

testifying “you could not have sold the product without this feature”; 772:22-24 (PI’s technical expert testifying “the ‘079 patented technology . . . as a technical matter, would have been required”)). According to those witnesses, the ‘079 technology became an essential feature of power supply controller chips when President George W. Bush, in July 2001, issued an Executive Order requiring federal agencies to purchase only electronic products capable of meeting a “one watt” efficiency standard “in their standby power consuming mode” (see id. at 296:22-23), as the ‘079 technology was the only technology available at the time that was capable of meeting such standard as well as other customer requirements (see id. 299:14-18 (PI’s CEO testifying ‘079 feature was only technology that could meet one-watt standby standard and customer “requirements” of low “ripple” and no “audible noise”); 531:7-10 (PI’s Vice President (“VP”) of Product Development testifying no technology was available, other than ‘079 technology, that could address new standard); 793:11-15 (PI’s technical expert testifying “there is no other way to meet” the “one-watt standby energy consumption requirement”)). PI’s CEO further testified that President Bush’s Executive Order effectively made the ‘079 feature a necessity for all power supply controller chips, regardless of whether they ultimately would be used to supply federal contracts, as incorporating the ‘079 technology in every power supply was “the only way” customers could be “sure that they [would] not [be] excluded from the government opportunity.” (See id. at 297:2-11 (testifying Executive Order was “turning point for the whole industry” and led customers to “decide[] that they have to meet one watt in all of their

products,” given that the “government was the largest purchaser of electronic products,” and “when a company makes a product,” it does not “know what product[s] [are] going to be purchased by the government”).)

Next, PI submitted evidence that, in addition to considering the ‘079 feature essential, its second largest customer, one SG was actively pursuing, “specifically demand[ed] [that] the ‘079 frequency reduction feature” be included in the power supply controller chips PI was manufacturing for it. (See id. at 315:10-12.)

Additionally, PI’s witnesses testified that when, in November 2000, the company introduced its TOPSwitch-GX chip (“GX”), the first of its power supply controller chips to practice the ‘079 invention, that chip rapidly outsold PI’s TOPSwitch-FX chip (“FX”), which practiced an older technology called “burst mode,” but was otherwise identical to the GX. (See id. at 323:10-12 (PI’s CEO testifying ‘079 patented feature was only difference between GX and FX); 324:17-20 (PI’s CEO testifying “[t]his was the first time we [had] a product [i.e., the FX] that is basically going away very, very quickly [b]ecause of the ‘079 invention in the TOPSwitch-GX”); 519:14-18 (PI’s VP of Product Development testifying there was a “very rapid decline of the FX,” as “the FX was instantly or virtually instantly of little use because the GX introduced such an important feature in the ‘079”); 701:16-19 (PI’s technical expert testifying “main technical difference” between FX and GX was “adoption in GX of the ‘079 patent[ed] invention”).)

Further, PI introduced SG documents highlighting the ‘079 patented feature, namely, a product press release (see PX 1820; Trial Tr. at 303:2-

24) and a 2004 article written by an engineer employed by SG, in which the engineer stated: “increasingly stringent government regulations regarding power consumption have been driving demand for power converters with reduced standby consumption” (see PX-1833; Trial Tr. at 317:12-319:25), i.e., with the ‘079 patented feature.

Fairchild argues “[s]uch evidence is insufficient as a matter of law to establish EMVR” under the test set forth in LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51 (Fed. Cir. 2012). (See Def.’s Mot. at 18:1-5.)<sup>5</sup>

As a threshold matter, the Court finds LaserDynamics factually distinguishable from the instant case. There, the plaintiff sought to recover damages based on the entire value of a multipurpose product, namely, a laptop computer, and the plaintiff’s patent only covered a method for “disc discrimination,” i.e., for identifying the type of device (e.g., a CD-ROM or DVD) a user has inserted into the laptop’s disc drive, see LaserDynamics, 694 F.3d at 56, a feature that serves only one of a laptop’s many purposes, see id. at 68 (noting laptops’ “plethora” of features), and is relatively minor compared to many

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<sup>5</sup> Although Fairchild also contends PI’s “proof at trial wholly failed to establish the buying preferences of Fairchild’s customers,” as opposed to those of PI (see Def.’s Mot. at 18:19-20 (emphasis omitted)), the record contains evidence that the parties were competitors and had the same customers. (See, e.g., Trial Tr. at 305:3-4 (PI’s CEO testifying PI had “same” customers as SG); 517:22-518:13 (PI’s VP of Product Development testifying PI was selling to “exact same” customers as SG); 756:9-10 (PI’s technical expert testifying SG was targeting “generally the same market that [PI’s] TOPSwitch-GX was trying to address”).)

of its other features. Under the circumstances presented therein, LaserDynamics concluded that the jury's finding that the patentee's disc discrimination method formed the basis for customer demand for the entire laptop was unsupported by the evidence. See id. at 68-69 (citing, as "illustrative," Lucent, 580 F.3d at 1332, wherein "patented feature was 'but a tiny feature of one part of a much larger software program'").<sup>6</sup>

Here, by contrast, the accused products are not multipurpose laptop computers or any other type of multipurpose product, but, rather, chips with a single purpose, which the '079 feature plays a significant role in achieving. Specifically, the accused chips are used in power supplies to "convert[]" the energy that "comes out of the wall outlet" for delivery to an "electronic product[]." (See Trial Tr. at 267:13-16; see also Def.'s Trial Brief, filed Dec. 10, 2015, at 1:16-17 (stating accused chips "perform the specific function of regulating the power output of the power supply").) The '079 feature, in turn, "improv[es] [the] efficiency" of a power supply controller chip in delivering energy to the charging device. (See Trial Tr. at 692:20; 276:18 (PI's CEO describing '079 patent as "energy efficiency patent").) Because the accused chips at issue here, unlike the laptops in LaserDynamics, have a single

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<sup>6</sup> In Lucent, the Federal Circuit found the evidence therein insufficient to support EMVR, where the plaintiff sought to recover damages based on the full value of Microsoft Outlook, a software program comprising, inter alia, e-mail, a "fully functional calendar system," and an "electronic Rolodex™," and the plaintiff's patent only covered a "date-picker" tool used in the calendar application. See 580 F.3d at 1332, 1337.



purpose, regulating the amount of energy delivered to a charging device, which purpose is directly served by the patented technology's function of increasing the efficiency of such delivery, it is not unreasonable for the jury to have found the patented feature here constitutes the basis for consumer demand for the accused products. See Veracode, Inc. v. Appthority, Inc., 137 F. Supp. 3d 17, 82 (D. Mass. 2015) (distinguishing "laptop computers . . . at issue in LaserDynamics" and declining to set aside jury's finding that EMVR applied; noting "here the product at issue has a very specific consumer purpose," which the product "achieves . . . in large part through [the patented technology]").

In support of its argument that PI's evidence failed to meet LaserDynamics' evidentiary standards, Fairchild first contends PI's evidence that the '079 feature was essential to customers and was emphasized in SG's promotional documents is insufficient under LaserDynamics, which held "[i]t is not enough to merely show that the [patented feature] is viewed as valuable, important, or even essential to the use of the [infringing product]." See 694 F.3d at 68. Next, as to PI's evidence that the GX chip outsold its predecessor, the FX chip, Fairchild cites LaserDynamics' holding that proof that consumers, "if given a choice between two otherwise equivalent [infringing products], only one of which practices [the patent]," would "choose the [infringing product] having the [patented] functionality says nothing as to whether the presence of that functionality is what motivates consumers to buy [the infringing product] in the first place." See id.

In response, PI cites three Federal Circuit decisions that pre-date LaserDynamics, each of

which upheld an EMVR finding and, in so doing, relied on evidence that LaserDynamics, as discussed above, arguably would find inadequate to support EMVR. In the first of those three cases, Bose Corp. v. JBL, Inc., the Federal Circuit, in holding that “substantial evidence” supported a royalty based “upon the entire value of [defendant’s] loudspeakers,” relied on evidence of an increase in the plaintiff’s “sales in the year following the introduction of [the plaintiff’s] speakers containing the invention.” See 274 F.3d 1354, 1361 (Fed. Cir. 2001).<sup>7</sup>

In Fonar Corp. v. General Elec. Co., the second of the three cases on which PI relies, the Federal Circuit, in holding the record contained substantial evidence in support of EMVR, relied on the defendant’s “own technical literature of record,” which “emphasized the [patented] feature.” See 107 F.3d 1543, 1552-53 (Fed. Cir. 1997).

In the third such case, Tec Air, Inc. v. Denso Mfg. Michigan, Inc., the Federal Circuit, in affirming an award based on EMVR, found the jury “could have reasonably concluded that the demand for [an] entire [radiator and condenser] assembly depended on the patented invention,” a method for balancing the fan contained in the assembly, where, without the patented method, the defendant could not meet a particular balance specification, and “after [the defendant] changed its specification,” one of its

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<sup>7</sup> Fairchild argues Bose is “inapposite, because that case involved a stipulation between the parties that the patented feature created the basis of customer demand.” (See Def.’s Mot. at 21 n.8.) Fairchild, however, cites no reference to any such stipulation in Bose, and the Court, having reviewed the opinion and the district court’s order under review therein, has found none.

customers “complained and required [the defendant] to rebalance the fans.” See 192 F.3d 1353, 1362 (Fed. Cir. 1999).<sup>8</sup>

Although one might argue that LaserDynamics, as compared with the three earlier cases, contains a more thorough analysis of the issue, the Court notes that none of those decisions is discussed in LaserDynamics, let alone criticized in any respect therein. Moreover, as PI points out, to the extent LaserDynamics cannot be reconciled with Bose, Fonar, and Tec Air, this Court is bound by the holdings in the earlier cases, as “prior decisions of a panel of the [Court of Appeals] are binding precedent . . . unless and until overturned in banc.” See Newell Companies, Inc. v. Kenney Mfg. Co., 864 F.2d 757, 765 (Fed. Cir. 1988) (holding, where two panel decisions conflict, “first” decision is “precedential”).

In sum, LaserDynamics is factually distinguishable from the instant case, and further, Fairchild has neither shown that the evidence in the record is inadequate to support a finding of EMVR under several precedential Federal Circuit cases, nor shown that this Court may decline to follow the

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<sup>8</sup> PI also relies on Marine Polymer Techs., Inc. v. HemCon, Inc., a more recent en banc decision in which the Federal Circuit found the jury’s application of EMVR was supported by “evidence pertaining to the importance of [the patented feature] in [the defendant’s] products and its significance for market demand.” See 672 F.3d 1350, 1360 (Fed. Cir. 2012) (internal quotation and citation omitted). In that decision, however, the Federal Circuit’s affirmance was by an equally divided vote, rendering the opinion non-precedential on the question of the type of evidence needed to support an award based on EMVR. See Taylor v. Tenant Tracker, Inc., 710 F.3d 824, 827 n.2 (8th Cir. 2013) (“[A]n affirmance by an equally divided [en banc] court is not binding precedent.”).

holdings in those cases. Accordingly, Fairchild has failed to show the verdict should be set aside on the ground that PI's evidence is insufficient to support EMVR under LaserDynamics.

**(2) Whether Fairchild's Evidence  
Compelled a Contrary Finding on  
EMVR**

Next, Fairchild argues that, for two reasons, evidence introduced by Fairchild independently renders EMVR inapplicable as a matter of law. First, Fairchild contends that because it offered "undisputed evidence . . . that other features, beyond the '079 patented feature, contributed to consumer demand for the infringing Fairchild products," the jury "did not have a legally sufficient basis to find" the '079 feature was the only basis of customer demand. (See Def.'s Mot. at 20:1-3 (emphasis omitted).) Fairchild's characterization of its evidence, however, is not wholly accurate. Although the record contains evidence that some of the unpatented features had value (see, e.g., Trial Tr. at 393:6 (PI's CEO testifying "frequency jitter" feature "contributed to the commercial success" of PI's power supply controller chips), Fairchild points to no undisputed testimony or other evidence that such features drove demand for the products. Second, Fairchild contends that EMVR is inapplicable because Fairchild presented evidence that "in some market segments, customers did not . . . need or want the '079 patented feature." (See Def.'s Mot. at 21:6-8.) Fairchild, however, cites no case holding a patentee relying on EMVR must show the patented feature creates the basis for every individual customer's purchase.

Accordingly, Fairchild has not shown the jury's finding that the '079 feature constituted the basis for customer demand for the infringing products should be set aside on the asserted ground that it is unsupported by substantial evidence.

**b. Sufficiency of the Evidence in Support of the Jury's Finding that the Accused Products are a Single Functioning Unit**

An additional requirement for application of EMVR is that the "patented and unpatented components [of the infringing product]" constitute "a single functioning unit." See Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1550 (Fed. Cir. 1995). Here, Fairchild argues no reasonable jury could have found the patented and unpatented features of its infringing products operate as a single functioning unit, because, according to Fairchild, the evidence showed the patent "cover[s] only one specific operational mode" of Fairchild's products. (See Def.'s Mot. at 22:7-9 (emphasis omitted).) The issue, however, is not the number of operational modes covered by the patent but, rather, whether "the unpatented components . . . function together with the patented component in some manner so as to produce a desired end product or result." See Rite-Hite, 56 F.3d at 1550, 1551 (finding single-functioning-unit test not satisfied where patented and unpatented components were sold together "only for marketing reasons, not because they essentially functioned together").

Accordingly, Fairchild has not shown the verdict should be set aside on the asserted ground that the

patented and unpatented components of its products do not function as a single unit.

**c. Whether the Court Issued Improper Jury Instructions Regarding EMVR**

Relying on Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201 (Fed. Cir. 2014) and LaserDynamics, Fairchild argues the Court erred in failing to instruct the jury that “the rule in determining reasonable royalty damages is to apportion, and that applying EMVR is the exception to that rule,” and “accentuated the error by giving the standard for EMVR before giving the standard on apportionment.” (See Def.’s Mot. at 22:16-20 (emphasis omitted).)

In Ericsson, the Federal Circuit held “district courts must make clear to the jury that any royalty award must be based on the incremental value of the invention.” See 773 F.3d at 1235. In LaserDynamics, the Federal Circuit described EMVR as a “narrow exception” to the apportionment requirement. See 694 F.3d at 67.

Here, the Court instructed the jury that “there are two alternative reasonable royalty damages theories, apportionment and entire market value rule.” (See Jury Instructions at 14:15-16.) The Court further instructed that, in order for the jury to find EMVR applies to an “entire multi-feature product,” the plaintiff must “establish[] that the patented feature creates the basis for customer demand for that product,” and that “[u]nder the apportionment of damages rule, the ultimate damages must reflect the value attributable to the infringing features of the product, and no more.” (Id. at 14:17-22.) Lastly, the Court cautioned the jury: “If it is not established that

the patented feature creates the basis for customer demand for the product, you must apportion the royalty down to a reasonable estimate of the value of the patented feature.” (Id. at 14:24-26.)

Contrary to Fairchild’s argument, neither of the cases it cites in support thereof requires the Court to further instruct the jury that apportionment is the “rule” to which EMVR is an “exception.” Moreover, to the extent Fairchild argues such instruction should be required, the Court disagrees. Whether a particular finding is based on a generally applicable legal standard, or on one applicable only in limited circumstances, has no bearing on the jury’s determination of whether the facts presented meet such standard. See Gordon v. New York City Bd. of Educ., 232 F.3d 111, 118 (2d Cir. 2000) (holding jury need not be instructed on concepts that are “not the province of the jury”); Henry v. Wyeth Pharm., Inc., 616 F.3d 134, 154 (2d Cir. 2010) (holding, in instructing jury, “trial judges should not import uncritically language . . . developed by appellate courts for use by judges”) (internal quotation, citation, and alteration omitted). For the same reasons, the Court finds unpersuasive Fairchild’s argument that the Court was required to give the instruction on apportionment prior to giving the instruction on EMVR. The jury need only be instructed, as it was here, on the “correct legal standard[s]” for making its findings. See id. Consequently, Fairchild, has not met the “heavy” burden required of a party attempting to “demonstrat[e] that an error has come about from sequential arrangement of [the] sentences” of a jury instruction. See Texas & Pac. Ry. Co. v. Jones, 298 F.2d 188, 191 (5th Cir. 1962).

Accordingly, as the Court was not required to tell the jury that apportionment is the rule and EMVR is the exception, nor was it required to address those concepts in any particular order, Fairchild has not shown the verdict should be set aside on grounds of instructional error. The Court next turns to Fairchild's arguments regarding Dr. Putnam's methodology.

**2. Whether Dr. Putnam's Methodology Caused the Jury to Award an Improper "Double Recovery"**

Fairchild contends the damages award should be set aside because Dr. Putnam's methodology led the jury to award an impermissible "[d]ouble [r]ecovery." (See Def.'s Mot. at 9:3.)

Fairchild first argues "Dr. Putnam's damages theory . . . overcompensates by providing damages for both full actual lost profits damages," i.e., lost sales and price erosion on sales PI would have or did make, "and an additional reasonable royalty," i.e., a fee for infringing use on sales PI would not have made. (See *id.* at 8:5-7 (emphasis omitted)). Those three categories of loss are, however, distinct types of harm suffered by a patentee, and, as a result, a patentee may, on a sufficient showing, recover for each type of loss without running afoul of the prohibition on double recovery. See Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc., 246 F.3d 1336, 1354, 1357 (Fed. Cir. 2001) (holding "patentee may obtain lost profit damages for that portion of the infringer's sales for which the patentee can demonstrate 'but for' causation and reasonable royalties for any remaining infringing [sales]"; further holding patentee may also recover



for “[r]eduction of [its] prices, and consequent loss of profits, enforced by infringing competition”) (internal quotation and citation omitted).

Fairchild next argues there nonetheless has been a double recovery in the instant case because Dr. Putnam, in calculating both lost profits and a fee for infringing use, “use[d] all 435,254,064 infringing Fairchild units.” (See Def.’s Mot. at 9:16-18 (emphasis omitted).) Fairchild appears to argue that PI obtained a double recovery for the reason that price erosion is caused by price competition, and price competition is caused by the infringer’s sales of the infringing products, which sales include sales for which Dr. Putnam calculated a fee for infringing use. As a result, according to Fairchild, the verdict awarded PI damages “that necessarily arose from the same infringing acts.” (See *id.* at 9:13-14 (emphasis omitted); see also *id.* at 9 n. 4 (“It is not the counting of units that is impermissible, but the use of the same acts of infringement to calculate two separate forms of damages (lost profits and a royalty).”) (emphasis omitted).)<sup>9</sup>

Fairchild is correct that a patentee’s price erosion damages are caused by infringing sales, see Crystal Semiconductor, 246 F.3d at 1357 (noting plaintiff’s “[r]eduction of prices” is caused by “infringing competition”) (internal quotation and citation omitted), as are a patentee’s damages due to the infringer’s failure to pay a fee for its infringing use.

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<sup>9</sup> Although Fairchild also asserts Dr. Putnam made “contradicting . . . assumption[s]” in his royalty analysis (see Def.’s Mot. at 10:12), Fairchild has not attempted to show Dr. Putnam’s use of such assumptions resulted in a double recovery.

Fairchild cites no authority, however, holding a single wrongful act cannot result in more than one compensable harm. Indeed relevant authority exists to the contrary. See Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1378 (Fed. Cir. 2013) (holding “damages for infringement may account for both lost sales and reduction of prices due to infringing competition,” as “an infringer’s activities do more than divert sales to the infringer[;] [t]hey also depress the price of the patented product”) (internal quotation, citation, and alteration omitted).<sup>10</sup>

Accordingly, Fairchild has not shown the verdict should be set aside on the asserted ground that the jury award constituted a double recovery.

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<sup>10</sup> Fairchild’s citation to Transclean Corp. v. Bridgewood Servs., Inc., 290 F.3d 1364 (Fed. Cir. 2002), and Rodime PLC v. Seagate Tech., Inc., 174 F.3d 1294 (Fed. Cir. 1999), for the proposition that PI has been awarded a double recovery is unavailing. First, Transclean is readily distinguishable on its facts. There, the Federal Circuit found a double recovery where the patentee was awarded a royalty based both on sales made by the infringer and on goodwill from the sale of the infringer’s business, for the reason that the “award [on the infringing sales] already compensates [the patentee] for any goodwill [the infringer] garnered by infringement.” See 290 F.3d at 1377 (internal quotation and citation omitted). Next, contrary to Fairchild’s contention, Rodime did not consider the question of a double recovery. Instead, the Federal Circuit held that a patentee pursuing a royalty theory of damages could not recover for consequential business damages, a particular “species of lost profits,” where the patentee had not accounted for those lost profits in the framework of its hypothetical negotiation. See 174 F.3d at 1308.

**3. Whether Dr. Putnam's Methodology Improperly Caused the Jury to Award the Entirety of PI's Lost Profits in Damages**

Fairchild next argues that Dr. Putnam's royalty calculations "wrongly focused on harm actually suffered by PI," i.e., its "actual lost profits" (see Def.'s Mot. at 11:14-15), whereas, according to Fairchild, "a patentee's lost sales are not relevant in a reasonable royalty analysis" (see *id.* 6:26-28). Although Fairchild is correct that Dr. Putnam's calculations use the parties' actual sales figures from years subsequent to the hypothetical negotiation, his calculations represent the parties' predictions of market events that, Dr. Putnam testified, were reasonably foreseeable at the time of the hypothetical negotiation. As PI points out, such approach is authorized under Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970), which holds that, in determining a royalty award, the factfinder may consider, *inter alia*, "the anticipated amount of profits that the prospective licensor reasonably thinks he would lose as a result of licensing the patent." See *id.* at 1121 (internal quotation and citation omitted); see also Powell v. Home Depot U.S.A., Inc., 663 F.3d 1221, 1238 (Fed. Cir. 2011) (holding "patentee's profit expectation may be considered in the overall reasonable royalty analysis") (citing Georgia-Pacific, 318 F. Supp. at 1120).

Although Fairchild, in its reply, concedes that Georgia-Pacific allows for consideration of a patentee's anticipated lost profits, Fairchild argues that a patentee nevertheless is not permitted to recover "one hundred percent of lost profits" as a

reasonable royalty.<sup>11</sup> (See Def.’s Reply at 7:8-10). Fairchild, however, cites no case in which a patentee was barred from recovering the entirety of its actual lost profits as a royalty. Although in Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538 (Fed. Cir. 1995), the Federal Circuit found the royalty awarded, representing half the patentee’s expected lost profits, was “reasonable” under the facts presented therein, it did not, contrary to Fairchild’s characterization, hold that a royalty award must be “discounted from actual lost profits” (see Def.’s Mot. at 7:19-20), or that lost profits may only serve “as a check on a reasonable royalty number” (see id. at 8:16-17).<sup>12</sup> Indeed, the Federal Circuit has held that a reasonable royalty may exceed a patentee’s anticipated profits. See Powell, 663 F.3d at 1238 (holding “patentee’s profit expectation” is not “a cap on the reasonable royalty that the patentee may receive”) (emphasis omitted).

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<sup>11</sup> Fairchild makes a related argument that the Court erred in instructing the jury that a “damages award should put the patent holder in approximately the financial position it would have been in had the infringement not occurred” (see Jury Instructions at 13:6-7) because, according to Fairchild, such instruction wrongly “focused the jury on making PI financially whole” (see Def.’s Mot. at 17:4). Read in context, however, the challenged language does no more than tell the jury that a prevailing patentee is entitled to the royalty it would have obtained had a licensing negotiation been conducted.

<sup>12</sup> Fairchild’s reliance on AstraZeneca AB v. Apotex Corp., 782 F.3d 1324 (Fed. Cir. 2015) likewise is unavailing. Although the Federal Circuit rejected an argument that the “essential purpose” of calculating a royalty is “to compensate [the patentee] for harm actually suffered,” id. at 1333, it did not hold such loss could not be considered, along with other relevant factors, in arriving at a reasonable royalty.

Accordingly, Fairchild has not shown the verdict should be set aside on the ground that the royalty calculated by Dr. Putnam included the full amount of PI's anticipated lost profits.

**4. Whether Dr. Putnam Improperly Used the Parties' Actual Sales Figures to Calculate a Reasonable Royalty**

Fairchild further contends Dr. Putnam's use of the parties' actual sales figures in his hypothetical negotiation construction was improper, because, according to Fairchild, "the parties in a hypothetical negotiation only know the facts as of [the time of the hypothetical negotiation]," i.e., the time just prior to the period of infringement. (See Def.'s Mot. at 15:17-18.) Fairchild is correct that a "royalty determination for purposes of making a damages evaluation must relate to the time infringement occurred, and not be an after-the-fact assessment." See Riles v. Shell Expl. and Prod. Co., 298 F.3d 1302, 1313 (Fed. Cir. 2002). Nevertheless, "the hypothetical negotiation analysis permits" and, as the Federal Circuit has recognized, "often requires a [finder of fact] to look to events and facts that occurred thereafter and that could not have been known to or predicted by the hypothesized negotiators." See Lucent, 580 F.3d at 1333 (Fed. Cir. 2009) (internal quotation and citation omitted). Consequently, evidence of "actual profits generally is admissible as probative of . . . anticipated profits." See Aqua Shield v. Inter Pool Cover Team, 774 F.3d 766, 772 (Fed. Cir. 2014).

Accordingly, Fairchild has not shown the verdict should be set aside on the asserted ground that Dr.

Putnam's royalty calculations included an improper after-the-fact assessment.

**5. Whether the Royalty Award Would Have Bankrupted SG or Would Not Have Allowed SG to Make a Reasonable Profit**

Fairchild next argues the Court should set aside the \$139.8 million royalty award, for the reason that a royalty of such magnitude would have bankrupted SG, which had only \$9.8 million in cash reserves at the time of the hypothetical negotiation, or, at a minimum, would have left SG with no opportunity to make a profit. There is, however, no support in the record for either proposition.

First, Fairchild has not shown SG would have gone bankrupt if required to obtain a \$139.8 million license, as SG could have raised its prices to cover the cost of a license. See Douglas Dynamics, LLC v. Buyers Prods. Co., 717 F.3d 1336, 1346 (Fed. Cir. 2013) ("The infringer's selling price can be raised if necessary to accommodate a higher royalty, and indeed, requiring the infringer to do so may be the only way to adequately compensate the patentee for the use of its technology."). In particular, Dr. Putnam testified SG could have increased its price by 32 cents per unit. (See Trial Tr. at 1213:11; 1235:8-12.) Consequently, the funds to pay for the license could have come from sales of the infringing products, and not out of SG's cash reserves. Although, as Fairchild points out, SG "could not have anticipated selling anywhere near the actual 435 million units if it had contemplated [such] price increase" (see Def.'s Mot. at 14:11-13), Dr. Putnam did not use all 435 million units in his calculations; rather, he accounted for decreased demand at his

assumed higher price by adjusting downward the number of units Fairchild would have been able to sell and only incorporating in his royalty the profits from that adjusted number of units. (See Trial Tr. at 1203:10-12 (adjusting downward number of units representing PI's lost sales); 1204:15-17 (adjusting downward number of units representing Fairchild's remaining infringing sales).)

Second, contrary to Fairchild's contention that PI "presented no evidence that SG could expect any profit if it raised its prices to cover the royalty" (see Def.'s Mot. at 14:6-8 (emphasis omitted)), Dr. Putnam testified that SG could have made a profit even if it had to pay the awarded royalty (see Trial Tr. at 1235:8-12 ("Q. What is your opinion of what would have happened in the hypothetical if SG had agreed to pay [a per-unit royalty of] 32 cents per chip? A. They would have charged a higher price and sold fewer units, and been able to compensate Power Integrations as well as make a profit.")). Fairchild has cited no evidence to the contrary or otherwise attempted to show such opinion is unsound.

Accordingly, Fairchild has not shown the verdict should be set aside on the asserted ground that SG, if required to pay the royalty awarded, would have been rendered bankrupt or unable to make a profit.

**6. Sufficiency of the Evidence Offered to Show Fairchild's Infringing Products are Imported into the United States**

Relying on Power Integrations, 711 F.3d at 1376, which decision was issued in the context of prior litigation between the parties, Fairchild argues that the jury verdict should be set aside because, according to Fairchild, PI failed to prove any infringing product “was imported into the United States.” (See Def.'s Mot. at 23:20-22.)<sup>13</sup> The Court disagrees. Gaurang Shah, a Fairchild executive, while acknowledging the calculation is “not an exact science,” testified that “20 to 30 percent” of Fairchild's power supply controller chips are imported into the United States. (See Trial Tr. at 1289:5-7.) In Power Integrations, by contrast, the evidence on which plaintiff relied, specifically, a third party's “mobile phone sales data,” was held “impermissibly speculative” where plaintiff failed to present evidence “linking” such data to defendants' infringing power circuits. See 711 F.3d at 1376 (noting lack of “evidence that the imports of [third party's] products included chargers” or “evidence that any included chargers incorporated [defendants'] infringing circuits”). Fairchild has made no attempt here to show the evidence on which Dr. Putnam based his calculation is unreliable for similar or other reasons.

Accordingly, Fairchild has not shown the verdict

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<sup>13</sup> The Court does not consider herein Fairchild's additional argument that a lack of evidence regarding importation of any particular infringing chip forecloses a finding of “specific intent on the part of Fairchild to induce infringement.” (See Def.'s Mot. at 24:12-13.) Such argument is,



should be set aside on the asserted ground that PI failed to prove Fairchild's infringing products were imported into the United States.

## **7. Conclusion as to Fairchild's Motion for JMOL**

As Fairchild has not shown a deficiency as to PI's evidence or Dr. Putnam's methodology, Fairchild's motion for JMOL is hereby DENIED.

## **B. Fairchild's Motion for New Trial**

Although Fairchild's motion purports to seek, in the alternative, an order granting a third trial on the issue of damages, Fairchild makes no attempt, apart from essentially incorporating by reference the arguments addressed above, to show the verdict is "contrary to the clear weight of the evidence," based on "evidence which is false," or a "miscarriage of justice." See Hanson, 541 F.2d at 1359 (setting forth grounds on which new trial may be granted). Instead, Fairchild, in the penultimate section of its motion, "requests a new trial . . . for all of the reasons set forth above." (See Def.'s Mot. at 25:13-14.)<sup>14</sup> The

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in effect, a motion for JMOL on the issue of liability and the instant re-trial was limited to the issue of damages. See Aguinaga v. United Food and Commercial Workers Int'l Union, 993 F.2d 1463, 1473 (10th Cir. 1993) (holding "defendant does not have a right to relitigate, at the damages phase, an issue he or she has already litigated and lost at the liability phase").

<sup>14</sup> The only point Fairchild makes that is arguably specific to its entitlement to a new trial is its assertion that a new trial is "warranted because of the excessiveness of the jury's award," which, according to Fairchild, constituted "632% of Fairchild's profits and 262% of its revenue." (See Def.'s Mot. at 25:20-24); Hanson, 541 F.2d at 1359 (holding new trial may be granted when "amount of compensation awarded is excessive") (internal quotation and citation omitted). Fairchild, however, cites no

Court, having reviewed the above-discussed evidence under the above-referenced standard for granting a new trial, declines to exercise its discretion to grant such relief.

Accordingly, Fairchild's motion for new trial is hereby DENIED.

### **C. PI's Motion for Prejudgment Interest**

Where a defendant is found liable on a claim of patent infringement, "the court shall award the claimant . . . interest and costs as fixed by the court." See 35 U.S.C. § 284. A prevailing patentee "should ordinarily be awarded" prejudgment interest, as such an award "is necessary to ensure that the patent owner is placed in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement." General Motors Corp. v. Devex Corp., 461 U.S. 648, 655-56 (1983). "[T]he district court has substantial discretion to determine the interest rate in patent infringement cases." Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 556 (Fed. Cir. 1984).<sup>15</sup> "Generally, prejudgment interest should be awarded from the date of infringement to the date of judgment." Nickson Indus., Inc. v. Rol

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evidence in the record to support those figures, and even if the record contains such evidence, a new trial would not be warranted, given PI's evidence as to Fairchild's ability to raise prices. See Douglas Dynamics, 717 F.3d at 1346.

<sup>15</sup> Although "the determination whether to award simple or compound interest similarly is a matter largely within the discretion of the district court," see id. at 557, here, the parties agree any interest should be compounded (see Putnam Decl. ¶ 3(c) (PI's expert stating "annual compounding of interest is appropriate"); Malackowski Decl. ¶ 11 (Fairchild's expert stating he performed his calculations "assuming annual compounding"))).

Mfg. Co., 847 F.2d 795, 800 (Fed. Cir. 1988). “[I]t may be appropriate,” however, “to limit prejudgment interest, or perhaps even deny it altogether, where the patent owner has been responsible for undue delay in prosecuting the lawsuit,” General Motors, 461 U.S. at 657, and the accused infringer has been prejudiced thereby, Crystal Semiconductor, 246 F.3d at 1361-62.

Here, PI seeks an award of prejudgment interest for the period beginning June 28, 2004, and ending December 18, 2015, calculated using the prime rate. Fairchild, citing General Motors, argues PI should be awarded no prejudgment interest, and in the alternative, only for the period beginning November 4, 2009, and ending March 4, 2014, calculated using the Treasury Bill rate.

In accordance with the Court’s tentative ruling on the record at the hearing, the Court, for the reasons stated by Fairchild in its opposition, finds it appropriate to apply the Treasury Bill rate and, for the reasons stated by PI in its motion, finds PI is entitled to interest for the period beginning June 28, 2004, and ending December 15, 2015.

Accordingly, PI’s motion for prejudgment interest is hereby GRANTED in part and DENIED in part, and the parties are hereby DIRECTED to file, no later than September 9, 2016, supplemental declarations in which PI’s prejudgment interest is calculated for the period from June 28, 2004, through December 18, 2015, using the Treasury Bill rate.

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**IT IS SO ORDERED.**

Dated: August 24, 2016     s/ Maxine M. Chesney  
MAXINE M. CHESNEY  
United States District  
Judge

**UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

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**POWER INTEGRATIONS, INC.,**  
*Plaintiff-Appellee*

v.

**FAIRCHILD SEMICONDUCTOR  
INTERNATIONAL, INC., FAIRCHILD  
SEMICONDUCTOR CORPORATION,  
FAIRCHILD (TAIWAN) CORPORATION,**  
*Defendants-Appellants*

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2016-2691, 2017-1875

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Appeals from the United States District Court for  
the Northern District of California in No. 3:09-cv-  
05235-MMC, Judge Maxine M. Chesney.

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**ON PETITION FOR REHEARING EN BANC**

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Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK,  
MOORE, O'MALLEY, REYNA, WALLACH, TARANTO,  
CHEN, HUGHES, and STOLL, *Circuit Judges*.

PER CURIAM.

**O R D E R**

Appellee Power Integrations, Inc. filed a petition  
for rehearing. A response to the petition was invited  
by the court and filed by appellants Fairchild  
Semiconductor International, Inc., Fairchild  
Semiconductor Corporation, and Fairchild (Taiwan)

Corporation. The petition was first referred to the panel that heard the appeal. The panel granted the petition in part and denied it in part (see accompanying order). Thereafter, the petition was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

- (1) The petition for rehearing en banc is denied.
- (2) The mandate of this court will issue on October 29, 2018.

FOR THE COURT

September 20, 2018  
Date

/s/ Peter R. Marksteiner  
Peter R. Marksteiner  
Clerk of Court

UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF  
CALIFORNIA  
SAN FRANCISCO DIVISION

POWER INTEGRATIONS,  
INC., a Delaware  
corporation,

Plaintiff,

v.

FAIRCHILD  
SEMICONDUCTOR  
INTERNATIONAL, INC.,  
a Delaware corporation,  
FAIRCHILD  
SEMICONDUCTOR  
CORPORATION, a  
Delaware corporation, and  
FAIRCHILD (TAIWAN)  
CORPORATION, a  
Taiwanese corporation

Defendants.

Case No. 09-cv-  
05235-MMC

**VERDICT FORM**

**VERDICT FORM**

When answering the following questions and filling out this Verdict Form, please follow the directions provided. Your answer to each question must be unanimous. Some of the questions contain legal terms that are defined and explained in detail in the Jury Instructions. Please refer to the Jury Instructions if you are unsure about the meaning or usage of any legal term that appears in the questions below.

We, the jury, unanimously agree to the answers to the following questions and return them under the instructions of this Court as our verdict in this case.

**REASONABLE ROYALTY**

1. What is the dollar amount Power Integrations has proved it is entitled to as a reasonable royalty for infringement through March 4, 2014?

\$ 139,800,000.00

2. In arriving at the above figure, did the '079 patented feature create the basis for customer demand for the infringing Fairchild products (Entire Market Value Rule)?

Yes   X   No       

Your foreperson must sign and date this Verdict Form:

Dated: DECEMBER 17, 2015

Signed: s/Erin Kelly (foreperson)



**35 U.S.C. § 284**

**§ 284. Damages**

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

When the damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed. Increased damages under this paragraph shall not apply to provisional rights under section 154(d).

The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.