IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

CARNEGIE MELLON UNIVERSITY, Plaintiff, v. MARVELL TECHNOLOGY GROUP, LTD. and MARVELL SEMICONDUCTOR, INC., Defendants.	Civil Action No. 2:09-cv-00290-NBF Hon. Nora B. Fischer

MARVELL'S REPLY IN SUPPORT OF MARVELL'S MOTION FOR JUDGMENT AS A MATTER OF LAW, NEW TRIAL AND/OR REMITTITUR
WITH RESPECT TO DAMAGES

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Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., --- F.3d ----, 2013 WL 1200270 (Fed. Cir. Mar. 26, 2013) ("*Power*"), strongly supports Marvell's argument (Dkt. 809) that the jury's damages verdict is contrary to law insofar as it includes in the royalty base chips never used in the United States. In our territorial patent system, the foreign use of a patented method—even if it were tied to domestic conduct, as CMU failed to show here—cannot be the basis for patent damages. For this reason and the others below, CMU's opposition (Dkt. 829, hereinafter "Opp.") fails, and Marvell's motion for JMOL on damages (or for new trial and/or remittitur) should be granted.[1]

I. MARVELL IS ENTITLED TO JMOL EXCLUDING CHIPS NEVER USED IN THE UNITED STATES FROM THE ROYALTY BASE

CMU nowhere suggests in its lengthy opposition that it has met the standard set out by this Court for including chips never used in the United States in the royalty base—*i.e.*, that a Marvell customer purchased any of those chips "***only*** due to infringement" (Dkt. 672, at 5-6). CMU contends instead that it proved a less stringent causal nexus—a "but-for link"—between Marvell's supposedly infringing conduct in the United States and damages for the non-infringing use of Marvell's chips overseas. (*E.g.*, Opp. 7.)

Any such weak causal nexus between overseas use and U.S.-based infringement, however, is legally foreclosed as a basis for patent damages by *Power*, which upheld vacatur of a damages award "based on ***worldwide*** sales," rejected the theory that such damages were permissible because "it was ***foreseeable*** that [the defendant's] infringement in the United States would cause [the plaintiff] to lose sales in foreign markets," and held that "the entirely ***extraterritorial production, use, or sale*** of an invention patented in the United States is an

[1] As *Power* confirms, a decision to set aside a jury's damages award is governed by regional circuit law, and Third Circuit law permits an award to be vacated if "unsupported by substantial evidence" or "contrary to … law"; a decision as to what types of patent damages "are legally compensable" is governed by Federal Circuit law. 2013 WL 1200270, at *3.

independent, intervening act that, under almost all circumstances, cuts off the chain of causation initiated by an act of domestic infringement." *Power*, 2013 WL 1200270, at *17-*19 (emphases added). It makes no difference to this fundamental principle that, in *Power*, the U.S. infringement was of a device patent (not a method patent), and the damages theory was one of lost profits (not reasonable royalty, as here) foreseeably resulting from infringing U.S. sales (not use). *Power* vindicates the larger principle that U.S. patent laws must not reach overseas and thus forecloses CMU's bid to recover on chips that are used abroad. The jury's damages award thus should be reversed or vacated as contrary to law insofar as chips never used in the United States were part of the royalty base.

Even if "but for" causation were enough, CMU failed to offer evidence demonstrating that Marvell's supposed use of the infringing method in the United States drove any customer demand for Marvell chips for overseas use. Thus JMOL should also be granted on the royalty base for the independently sufficient reason that inclusion of foreign chips is not supported by substantial evidence.[2]

A. The Federal Circuit's Decision In *Power* Supports Grant Of JMOL Insofar As The Damages Verdict Is Contrary To Law

In *Power*, the Federal Circuit affirmed the reduction of a jury's damages award because the "original award of worldwide damages" was "contrary to law." *Power*, 2013 WL 1200270, at *1, *17, *18, *19. Like CMU, Power had contended that it was entitled to damages for all sales that would not have been "made but for [defendant's] domestic infringement." *Id.* at *18. Specifically, Power alleged—and the jury agreed—that Fairchild would not have won a worldwide Samsung account (and thus would not have generated any revenue from that account)

[2] Setting aside the issue of extraterritoriality, the "but-for" test is the standard for measuring damages by lost profits (as in *Power*); CMU's application of a "but-for" test to determine the base for a reasonable royalty is, as this Court found previously (Dkt. 672, at 5), "novel."

but for Fairchild's making, offering for sale, and selling accused devices in the United States, all of which were found to infringe the asserted device claims. *Id.* But the Federal Circuit rejected Power's theory of damages, holding that:

> Power Integrations is incorrect that, having established one or more acts of direct infringement in the United States, it may recover damages for Fairchild's worldwide sales of the patented invention because those foreign sales were the direct, foreseeable result of Fairchild's domestic infringement.

Id. at *19.

In all relevant respects, this case is indistinguishable from *Power*. In *Power*, ***sales*** of the patented device constituted the infringing activity, and the jury awarded damages based on ***worldwide sales***. Here, ***use*** of the patented method constitutes the infringing activity, and the jury awarded damages for ***worldwide use***, assessing a $.50 royalty on more than 1.5 billion chips that CMU concedes were used only outside the United States, thereby "cut[ting] off the chain of causation" in the words of the Federal Circuit. Pursuant to *Power*, such an award is "contrary to law," regardless whether the use of those chips outside the United States—or the Marvell revenue attributable to that use—was the but-for result of Marvell's infringing conduct in the United States.

In precluding a "worldwide damages" award, the Federal Circuit recounted and explicitly ***rejected*** the very arguments that CMU has urged to support its damages theory here—namely, (i) that the concept of "full compensation" under Section 284 permits recovery of "but-for" damages resulting from domestic infringement (*compare* Opp. 1, 4-5 *with Power*, 2013 WL 1200270, at *18) and (ii) that the prohibition on the extraterritorial application of U.S. patent laws, articulated most recently in *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007), does not apply to damages issues or to non-271(f) cases (*compare* Opp. 4 n.6 *with Power*, 2013 WL 1200270, at *18). The Federal Circuit noted that a "'foreseeability' theory of worldwide damages sets the presumption against extraterritoriality in interesting juxtaposition with the principle of full compensation," but it nonetheless found the arguments in favor of such a theory "not persuasive." *Power*, 2013 WL 1200270, at *18. CMU cannot receive a royalty for chips used outside the United States regardless whether such a royalty may be "framed" as a measure of "full compensation" for Marvell's domestic infringement. *Id.* ("Regardless of how the argument is framed under the facts of this case, the underlying question here remains whether Power Integrations is entitled to compensatory damages for injury caused by infringing activity that occurred outside the territory of the United States. The answer is no.").

The result is the same regardless where the chips at issue were sold. As this Court has acknowledged, Marvell's sales cannot infringe the asserted method claims as a matter of law. (Dkt. 441, at 9.) Thus, Marvell's sales are not "relevant conduct," in that selling chips in the United States cannot give rise to liability ***or damages***. Indeed, in *Power*, the Federal Circuit reiterated the general principle that non-infringing conduct ***cannot*** be used to calculate damages, emphasizing that "[o]ur patent laws allow specifically 'damages adequate to compensate ***for the infringement***'" and "do not thereby provide compensation" for activity "which is not infringement at all." 2013 WL 1200270, at *18.

Although in *Power* this principle was discussed in the context of extraterritorial activity (which cannot be infringing), the principle applies equally to bar damages for domestic non-infringing activity (such as Marvell's sales here), as pre-*Power* Federal Circuit precedent makes clear. *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009), and *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075 (Fed. Cir. 1983), hold that non-infringing use may not be used as a basis for valuing infringing use—contrary to CMU's mistaken suggestion (Opp. 5 n.7) that a reasonable royalty need not be tied only to use of the patented method. In *Lucent*, the Federal Circuit explicitly stated: "The damages award ought to be correlated, in some respect, to ***the extent the infringing method is used***" (*i.e.*, infringement). 580 F.3d at 1334 (emphasis added). The Federal Circuit found that extensive use of a ***non-infringing*** feature of the software programs at issue could ***not*** be used to value the use of the infringing feature or otherwise substitute for quantifying the "extent to which the infringing method has been used." *Id.* at 1334-35. Thus, the Federal Circuit reversed the district court's denial of JMOL and vacated a damages award where Lucent had failed to meet its burden to prove "how often consumers ***use*** the patented date-picker invention" (*i.e.*, how often the infringing method was used in the United States). *Id.* at 1334, 1340 (emphasis added).

In *Hanson*, the Federal Circuit upheld a reasonable royalty based on "the estimated cost savings resulting from Alpine's ***use*** of the infringing Hedco machines." 718 F.2d at 1080 (emphasis added). While the use that formed the royalty base (which was then multiplied by the cost-savings rate) was an estimated use and not an actual use, *id.* at 1081 (noting that the royalty calculation was based "on the use of the machines for 800 hours a year," which "constituted an average season's use of snowmaking systems for resorts in the area where Alpine is located"), that does not change the fact that the royalty base quantified the ***infringing*** activity, namely the estimated hours of use of the patented method in the United States.

As demonstrated by these cases and as explicitly held in *Power*, a royalty base thus must represent a quantification of ***infringing*** conduct (here, use of the patented method in the United States), whether it be an actual quantification or a quantification that is estimated for convenience. The royalty rate is then used to value each instance of the ***infringing*** conduct. And the resulting royalty thereby compensates a patent holder "***for the infringement***." *Power*, 2013 WL 1200270, at *18 (emphasis in the original).

The only ***infringement*** here is the use of the patented method in the United States. To the extent Marvell's sales may be considered an estimated measure of ***use*** (which is the only "relevant conduct" in the context of method claims), total sales (the royalty base used by the jury) is an impermissible measure because it correlates with the number of chips ***used worldwide***, and thus does ***not*** estimate use of the patented method ***in the United States***. Thus, customers' extraterritorial use is "an independent, intervening act" that breaks the chain of causation between Marvell's supposed domestic use of the patented method and its receipt of benefits from that use. *Power*, 2013 WL 1200270, at *19.

B. CMU's But-For Damages Theory Is Not Supported By Substantial Evidence

Even if CMU's "but-for" theory of damages were legally permissible (which it is not, because as *Power* reaffirmed, "foreseeability" is not enough), that theory is not supported by substantial evidence in the record. CMU can point to no evidence to show that any of Marvell's sales took place in the United States. And CMU has now essentially conceded that it did not offer evidence to establish but-for causation at trial. For this independently sufficient reason as well, Marvell's JMOL should be granted.

1. There Is No Evidence That Sales Took Place In The United States

As set forth above, the location of Marvell's sales is irrelevant because sales are non-infringing and because sales do not provide a measure of ***U.S.*** use of the patented method (*i.e.*, infringement). Nonetheless, CMU's repeated assertion that it is entitled to damages for worldwide use because all of Marvell's sales took place in the United States (*e.g.*, Opp. 1, 3, 6, 28) has ***no*** support in the evidentiary record. As this Court has acknowledged (Dkt. 195, at 3-4), certain factors must inform any legal determination of where a "sale" takes place; those factors include the location of delivery, the location of the buyer, the location of the passage of legal title, the location of contracting, and the location of execution of the sales contract. But CMU cites no evidence indicating that any such activities took place in the United States with respect to any one or more of Marvell's sales. To the contrary, with respect to chips that CMU ***concedes*** never entered into the United States at all, factors such as the location of delivery, the location of the buyer, and the location of the passage of legal title require a finding that Marvell's sales took place ***outside*** the United States.

In light of the absence of evidence suggesting that chips that have never been present in the United States were somehow sold in the United States, CMU makes much of Marvell's "stipulation" that it engages in research, design, development, marketing, and testing in the United States. (*E.g.*, Opp. 6 & n.10.) But CMU cites no authority suggesting that any of those activities is relevant to the legal determination of where a "sale" takes place. And Marvell's broad use of the term "sales cycle" to describe those activities does not transform such conduct into a "sale" as a legal matter. Indeed, in tacit admission of this gap in evidence regarding the location of sales, CMU argues that ***Marvell*** "presented no documents establishing that the sales took place ***outside*** the U.S." (Opp. 6.) But it was ***CMU's*** burden to introduce evidence establishing whatever it believed necessary to support its damages theory; Marvell had no burden to prove anything about where its sales took place. *E.g.*, *IP Innovation LLC v. Red Hat, Inc.*, 705 F. Supp. 2d 687, 690 (E.D. Tex. 2010) (Rader, C.J.) (rejecting plaintiff's attempt to shift burden on damages to defendant).

In the end, CMU resorts to insisting that the jury has already found that "all of Marvell's sales" took place in the United States and that the jury's finding on that point should not be disturbed. (Opp. 2 n.2, 4 n.5, 28.) But not only was there insufficient evidence to support such a jury finding, there ***was no such finding***. The instruction permitting the jury to consider sales "resulting from" infringing use when assessing damages did ***not*** require the jury to first find that such sales took place in the United States. (12/21/12 Tr. 63:1-7.) The jury was never instructed on the law relevant to determining the location of a sale. And the verdict on contributory infringement indicates only that the jury found "***at least one***" sale or offer to sell took place in the United States. (Dkt. 762, at 4.) Thus, there is ***no*** indication that the jury found that ***any*** of the subset of chips that have never been present in the United States was somehow sold here.

2. There Is Not Substantial Evidence To Establish But-For Causation

Contrary to CMU's argument (*e.g.*, Opp. 6, 8) the mere fact that Marvell used the patented method during the sales cycle does not establish ***but-for causation*** between that use and any particular sale. The fact that a customer might buy a car with a cupholder does not establish that the cupholder drove customer demand for the car; many customers would purchase the same car even if it did not come standard with a cupholder. Faced with this problem, CMU erroneously contends (Opp. 6-8) that evidence of "customer demand" for the patented feature—here, evidence that customers would not have purchased Marvell chips "but for" the MNP or NLD feature—is "legally irrelevant." But CMU's ***own*** "but-for" damages theory depends, by definition, upon a showing that ***customer demand*** for the accused circuits was such that customers would not have bought the chips at issue "but for" inclusion of those circuits. Moreover, CMU's argument that customer demand for a patented feature is relevant only when applying the entire market value rule (*id.*) is wrong as a matter of law. *E.g.*, *Apple, Inc. v. Motorola, Inc.*, No. 1:11-cv-08540, 2012 WL 1959560, at *5, *7-*9 (N.D. Ill. May 22, 2012) (Posner, C.J.) (requiring analysis of customer demand regardless of the entire market value rule).

CMU made a strategic decision to ignore the issue of customer demand at trial because it had no evidence of such demand. The result is that there is no evidence of but-for causation in the record. As described in Marvell's opening brief (Br. 6), CMU's industry expert Dr. Bajorek testified that he had ***no*** opinion regarding whether Marvell's customers would or would not have purchased Marvell's chips but for the accused circuits. And the undisputed testimony is that several of Marvell's customers, including its largest customer Western Digital,[3] wanted Marvell to ***remove*** the accused circuits from its chips, demonstrating that those circuits were ***not*** a but-for cause of customer purchases. (*Id.* at 6-9.)

CMU's attempts to side-step this deficiency in the evidentiary record are unavailing. *First*, CMU contends that it introduced evidence to show that Marvell believed that the accused technology was "must have." (Opp. 9-10.) But evidence regarding Marvell's state of mind regarding the MNP is not evidence of actual but-for causation between ***Marvell's*** inclusion of the accused technology in its chips and its ***customers'*** decisions to purchase those chips. Whether a car maker thinks a cupholder is needed to compete with other manufacturers cannot establish that any particular customer would not have purchased the car but for the cupholder. Here, the undisputed evidence shows that, whatever ***Marvell's*** state of mind, ***customers*** were ***not*** impressed with the accused technology, they did ***not*** want it, and they would have bought Marvell's chips ***without*** it. (Br. 6-9.)

Second, CMU contends that the mere use of the MNP by Marvell's customers establishes but-for causation. (*E.g.*, Opp. 13.) But that is not the case. When customers requested that the MNP be removed from Marvell's chips, it was too late for Marvell to pull the circuit out of its chips without investing substantial time and resources and risking delays in production. (12/17/12 Tr. 225:13-24; *see also* Dkt. 837-2 (Wu Affidavit) ¶¶ 9-10.) That Marvell delivered chips without removing the accused circuits and that customers used those chips anyway does

[3] CMU's assertion that Mr. Baqai "was forced to recant his testimony that WD did not see any SNR gain from the infringing technology" (Opp. 13) is false. Nothing cited by CMU (*id.* at 13 n.24) remotely supports that assertion. Regardless, Mr. Baqai testified consistently—several times—that the accused technology played no role in Western Digital's purchasing decisions (and thus could not have been the but-for cause of those purchases). (Br. 7-8.)

not negate the undisputed evidence that customers would have purchased Marvell's chips ***without*** the accused circuits. A customer may not care about the cupholder—and may have even preferred to purchase the car without it—but may nonetheless use the cupholder. That does not transform the cupholder into the but-for cause of the customer's decision to buy the car.

Indeed, CMU admits—as it must—that the evidence shows that the accused technology was not well-received by Marvell's customers (at least "initially") and that the media noise problem that the accused technology was supposed to solve was a "relatively modest" problem when the MNP was introduced by Marvell. (Opp. 11-12.) But CMU ignores the critical import of these undisputed facts, suggesting instead that it was adequate for CMU to show that—sometime after the introduction of the MNP—"CMU's technology became increasingly important." (*Id.*) But, if CMU's technology was not a but-for cause of initial sales (for which CMU was nonetheless awarded damages), ***when*** and for ***which sales specifically*** was CMU's technology not only "important" but a ***but-for*** cause? CMU offered no evidence providing an answer to that question at trial because it had no evidence of customer demand at any particular time. The absence of evidence regarding but-for causation requires that JMOL be granted here.

C. The Damages Award Should Be Reduced To $164,648,899 At Most

CMU argues that, if chips never used in the United States are excluded from the royalty base (as is appropriate), the resulting damages award "must be no less than $278,406,045.50" (or 556,812,091 chips multiplied by $.50). (Opp. 28-29.) But CMU did not introduce substantial evidence at trial to support this alternative award.

As explained in Marvell's opening brief (Br. 9-10), Ms. Lawton based her estimate that 556,812,091 Marvell chips were imported into the United States on data regarding "the number of PC's imported to the United States." CMU contends that such a methodology was permissible (i) because the PC data came from "industry publications on which Marvell itself relied" and (ii) because Marvell "never objected to or otherwise challenged Ms. Lawton's estimate." (Opp. 29 n.54.) But (i) there is no evidence that Marvell ever relied on data regarding PC imports ***for the purpose of*** estimating the number of its own chips present in the United States (as Ms. Lawton did) and (ii) it was ***CMU's*** burden to introduce substantial evidence to support its damages claim

Moreover, the fundamental fact remains that not all PCs contain Marvell chips. And there is no evidence—much less substantial evidence—to support Ms. Lawton's assumption that the number of ***Marvell*** chips in the United States can be derived from the ***total*** number of ***PCs*** imported into the United States. Here again, this case is indistinguishable from *Power*. 2013 WL 1200270, at *21-*23. In *Power*, a damages expert estimated the number of phone chargers with infringing circuits imported into the United States by relying on data regarding the number of cell phones imported into the United States. *Id.* But the Federal Circuit found that there was insubstantial evidence connecting the data regarding the importation of phones and the expert's opinion regarding the importation of accused circuits. *Id.* at *23 (characterizing expert's opinion as "pure speculation" and vacating district court's award of damages for devices imported into the United States). Similarly here, Ms. Lawton's opinion that 556,812,091 chips were imported into the United States is pure speculation and unsupported by any evidence.

Indeed, under *Power*, CMU did not sufficiently establish ***any*** royalty base of chips used in the United States. *Id.* CMU introduced ***no*** testimony or evidence to support its "secondary" contention that 329,297,798 chips were imported into the United States, even after Ms. Lawton gave cursory mention to that alternative royalty base during cross examination (12/10/12 Tr. 208:9-210:2). As a result, Marvell should be granted JMOL for $0 damages.

II. MARVELL IS ENTITLED TO JMOL REJECTING A $.50/CHIP RATE

The Federal Circuit's decision in *Power* also requires that JMOL be granted with respect to the royalty rate. Ms. Lawton testified that her $.50/chip rate was based in large part on

Marvell's profits from the ***worldwide use*** of the patented method. (*E.g.*, 12/10/12 Tr. 62:6-13, 169:3-15.) But imposing a rate derived from the value of worldwide use—even when applied to an appropriate base—works to compensate CMU for foreign activity, and such a result in prohibited by *Power*. 2013 WL 1200270, at *18 (regardless how "framed," damages cannot be derived from "infringing activity that occurred outside the territory of the United States"). Even setting aside *Power*, however, the $.50/chip rate is not supported by substantial evidence.

A. The Excess Profits Analysis Cannot Support A $.50/Chip Royalty Rate

CMU's Opposition does nothing to address the legal flaw in Ms. Lawton's so-called "excess profits" analysis—namely, that it runs afoul of the Supreme Court's mandate that a patentee's damages be tied directly to the value of the patented feature. (Br. 12-13.) Because Ms. Lawton conceded that whatever margin Marvell is able to earn in "excess" of 50% has no particular relationship to the patented feature at issue in this case (12/10/12 Tr. 234:2-6, 242:1217, 259:12-24), "excess profits" is not a proper evidentiary basis for the determination of a royalty rate as a matter of law.

CMU's explanation for why chips ***without*** the accused circuits have ***greater*** "excess profits" than chips ***with*** the accused circuits (Opp. 15-16) only illustrates the problem with CMU's analysis: there are a variety of factors that contribute to Marvell's total margins on chips ***with and without*** the accused circuits, and there is simply no link between the accused circuits and whatever portion of Marvell's margins happens to be greater than 50%. CMU cannot escape these facts by arguing (Opp. 16) that 50% margins "give credit to Marvell for all of its non-infringing contributions to the chips." As Ms. Lawton testified, the 50%-margin target simply represents Marvell's estimate of an "adequate profit for its business,"[4] not an actual or expected

[4] Ms. Lawton testified: "What is the adequate return? What kind of profits do I have to earn in my business in order to make it worth my while? And Dr. Armstrong's testimony was fifty

margin tied to any particular product or combination of technologies. (12/10/12 Tr. 259:19-21.)[5] And Ms. Lawton conceded that she made absolutely ***no*** attempt to value any of the non-infringing contributions to the chips, as she had neither the expertise nor the information necessary to do so. (*E.g.*, 12/10/12 Tr. 231:6-232:8.)

"Excess profits" over a ***target*** margin does not measure the value of any particular feature—indeed, if "excess profits" were assigned to each SNR feature incorporated in Marvell's chips (nevermind the hundreds of other features in those chips), the result would wipe out Marvell's ***total*** margins three times over. (D-Demo9, at 9.)

B. The Premium Analysis Cannot Support A $.50/Chip Royalty Rate

Ms. Lawton's profit premium analysis likewise cannot support the jury's conclusion regarding a royalty rate in this case. Although CMU contends that "an expert's opinion may be derived from a small sample size" (Opp. 19), the point here is that the sample is ***not representative***. CMU did not introduce ***any*** evidence—nevermind substantial evidence—to support extrapolating from a supposed premium on 9885 sample read channels sold to one of Marvell's smallest customers to more than a billion SoCs sold to Marvell's largest customers.

For example, Ms. Lawton's ***own*** testimony—which CMU ignores—is that profits on read channels cannot be used as any sort of "benchmark" because the high profit margins in the read channel market were due to factors "unrelated to what is at issue in this case." (12/10/12 Tr. 74:4-74:18.) In light of this testimony, a reasonable jury could not extrapolate supposed profit

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percent." (12/10/12 Tr. 259:19-21.) Thus, regardless of CMU's protestations to the contrary (Opp. 15), Ms. Lawton's opinion is that Marvell should pay royalties that would drop its margins below 50%, leaving it without what it believed to be the return necessary to make its business worthwhile.

[5] The cases cited by CMU (Opp. 16) indicate that the value of a patented feature may be determined with reference to ***actual*** margins earned with and without that feature. A ***target*** margin for an entire business unit—already surpassed ***without*** using the patented feature—has no relationship to the value added by that feature.

premiums on 9885 ***read channels*** to millions of ***SoCs*** making up a majority of CMU's royalty base (*e.g.*, P-Demo 13, at Chart 23).

As another example, CMU ignores the affirmative evidence that Western Digital did ***not*** pay any premium for the accused technology (Br. 15). That evidence remained uncontroverted ***as Ms. Lawton did not find any price premium paid by Western Digital***. (Opp. 18-19.) And evidence that Western Digital used chips that contain the accused circuits (*id.* at 19 n.35) is not evidence that Western Digital wanted those circuits or paid any premium for them. (*See supra* Part I.B.2.) No reasonable jury could apply a profit premium on 9885 read channels sold to Maxtor to millions of SoCs sold to Western Digital.

Finally, even the premium on the Maxtor chips values more than the patented technology. CMU offers no response to the uncontroverted evidence that the alleged premium encompasses the value of ***both*** the patented method (contributed by CMU) and the hardware implementing the method (contributed by Marvell). And CMU concedes that the alleged premium encompasses other features altogether, as the accused circuitry was at most "the key difference between the chips that Ms. Lawton compared," not the only difference. (Opp. 18 n.34.)

C. Neither Rate Takes Into Account Non-Infringing Alternatives

Marvell did not waive its argument regarding non-infringing alternatives. Marvell challenged the sufficiency of the evidence related to damages (and the royalty rate in particular) in its Rule 50(a) motion. *See, e.g.*, *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1324-25 (Fed. Cir. 1991) (finding oral motion "on the issue of noninfringement" sufficient to preserve all arguments regarding noninfringement). And CMU specifically addressed the issue of "alternatives" for "get[ting] the SNR gain that [Marvell] needed" at the hearing on Marvell's Rule 50(a) motion (12/19/12 Tr. 43:24-44:3). *Gaus v. Conair Corp.*, 363 F.3d 1284, 1287 (Fed. Cir. 2004) (finding no prejudice and no waiver where opposing counsel was otherwise on notice of grounds for JMOL); *see also Boehringer Ingelheim Vetmedica, Inc. v. Schering Plough Corp.*, 166 F. Supp. 2d 19, 30-31 (D.N.J. 2001).

CMU's contention that alternative technologies for improving SNR do not constitute non-infringing alternatives (Opp. 23) is contrary to all of the evidence and to CMU's own arguments at trial. (12/4/12 Tr. 77:5-18, 186:14-16; 12/7/12 Tr. 175:10-21.) Moreover, by refusing to acknowledge those alternatives, CMU ignores the extensive record evidence regarding the availability of those alternatives (*e.g.*, 12/11/12 Tr. 240:20-281:5) and the fact that Ms. Lawton failed to consider such alternatives in determining her royalty rate. Accordingly, JMOL on CMU's royalty rate should be granted on this ground as well. (Br. 17-18.)

D. There Is Insufficient Evidence To Support A Running Royalty

Although CMU contends that Ms. Lawton testified "at length" regarding the DSSC Agreements and the Intel Subscription Agreement (Opp. 24), the fact remains that she offered no basis for ignoring the lump-sum structure of those agreements, which are ***actual*** licenses to (or options to license) the patents-in-suit. This too supports granting JMOL here. (Br. 19-20.)

III. ALTERNATIVELY, NEW TRIAL OR REMITTITUR SHOULD BE GRANTED

For all of the reasons set forth above and in Marvell's opening brief, if JMOL is not granted, a new trial regarding damages and/or remittitur to ***at most*** $164,648,899 is appropriate. Indeed, this is the minimum relief Marvell should be granted, as the instruction permitting the jury to consider "sales resulting from Marvell's alleged infringing use during the sales cycle" is contrary to the holding of *Power* and otherwise failed to provide adequate guidance to the jury.[6]

[6] Marvell did not waive its objection to this jury instruction: Marvell repeatedly reiterated its position with respect to issues related to extraterritorial conduct and explicitly objected no less than three times to the very instruction in question. (12/20/12 Tr. 3:24-4:20, 6:6-10, 7:24-8:1.) Moreover, the instructional error would require new trial even had there been a failure to object. *E.g.*, *Dressler v. Busch Entm't Corp.*, 143 F.3d 778, 783 (3d Cir. 1998).

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CERTIFICATE OF SERVICE

I hereby certify that on April 12, 2013, the foregoing was filed electronically on ECF. I also hereby certify that on April 12, 2013, this filing will also be served on counsel for CMU by electronic mail.

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