

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

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

**PLAINTIFF CARNEGIE MELLON UNIVERSITY'S
REPLY BRIEF IN SUPPORT OF ITS MOTION FOR A PERMANENT INJUNCTION,
POST-JUDGMENT ROYALTIES, AND SUPPLEMENTAL DAMAGES**

I. INTRODUCTION

In its Opposition (Dkt. 837), Marvell concedes that, even under its best case scenario, it *must infringe* CMU's patents for at least the next two years and will do so, undeterred by the jury's verdict, unless this Court orders it to stop. Marvell also concedes critical legal and factual issues,¹ makes empty promises, raises irrelevant matters, presents self-serving speculation as fact, and seeks to delay the resolution of this case. This Court should reject Marvell's bid to continue to infringe with impunity while draining the company of cash. It should therefore either enjoin Marvell from future infringement or issue an order ensuring that CMU will have an adequate remedy for future willful infringement, even during "transitional" periods.

II. ARGUMENT

A. Marvell Has Failed to Rebut CMU's Case for a Permanent Injunction.

1. **Marvell's Empty Promise to Pay Any Final Judgment Does Not Avoid Irreparable Harm to CMU That Cannot Be Remedied by Damages.**

Conceding that it must continue its infringement, Marvell offers only a self-serving promise to pay "any final damages award that survives appeal" to persuade the Court to allow it to do so. Dkt. 837 at 7; *see also* Dkt. 837-2 (S. Sutardja dec.) at ¶ 5. Dr. Sutardja's assurances that "Marvell is not a collection risk and will not attempt to evade paying a judgment against it," Dkt. 837-2 at ¶ 2, do not alleviate the irreparable harm asserted by CMU – *i.e.*, that Marvell (which is aggressively and strategically dissipating its liquid assets) will not be able to pay damages for future infringement. If the Court grants Marvell's request for permission to infringe, it must not leave CMU without a remedy for that infringement.

Marvell does not dispute that Marvell Technology Group, Ltd. ("MTGL") is incorporated in Bermuda and holds the majority of the assets available to satisfy the judgment. Marvell also

¹ Marvell does not dispute the legal basis for CMU's request for a permanent injunction. Specifically, Marvell does not contest that: (1) the decision whether to grant an injunction must be made on a case-by-case basis; (2) research organizations like CMU can obtain injunctions; (3) post *eBay*, courts have issued injunctions in favor of research organizations and other non-practicing entities despite the fact that the parties were not competitors; and (4) the Federal Circuit and district courts have held that collection risks support a finding of irreparable harm and the issuance of an injunction. *See* Dkt. 787, at 5-7 (citing cases).

admits that, unlike courts in the United States, Bermuda courts will not “automatically” enforce the judgment in this case.² *See* Dkt. 837 at 7. Marvell may try to assert numerous defenses under Bermuda law to resist enforcement of CMU’s judgment, including lack of jurisdiction, impermissible multiple (*e.g.*, doubled or trebled) damages, fraud, public policy, and breach of the rules of natural justice. *See* Dkt. 837-5 (summary of Bermuda law re: enforcement of judgments) at 17. The only reason Marvell would not have already waived these potential defenses is if, contrary to Dr. Sutardja’s declaration, it intends to contest enforcement in Bermuda.

Marvell’s actions speak louder than its words. If Marvell is to have any credibility when it represents that it will pay the judgment, including royalties for future infringement – and if the Court is to ascribe any weight to Marvell’s promise – Marvell must, at a minimum: (1) certify its commitment to pay in a binding writing³ wherein it waives all defenses to enforcement under Bermuda law or otherwise, and (2) deposit post-verdict royalties into an escrow account beginning on the date of the Court’s decision awarding such royalties.⁴ *See, e.g., Cummins-Allison Corp. v. SBM Co.*, 669 F. Supp. 2d 774, 779 (E.D. Tex. 2009) (ongoing royalties escrowed). Indeed, only then will Marvell have taken *actions* demonstrating its commitment to fulfill its legal obligations.

² Marvell mischaracterizes its statements in its November 29, 2012 10-Q about the potential unenforceability of U.S. judgments in Bermuda as relating only to judgments obtained under U.S. securities laws. *See* Dkt. 837 at 7 n. 2. In its 10-Q, Marvell makes clear that Bermuda courts may refuse to enforce *any* U.S. judgment, not just those based on U.S. securities laws. *See* Ex. 1 to Dkt. 787-1 (Marvell’s 10-Q dated 11/29/2012), at 44 (“a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, *whether or not based solely on United States federal or state securities laws*, would not be automatically enforceable in Bermuda”).

³ A similar certification of payment was given in lieu of a supersedeas bond in *Fractus, S.A. v. Samsung Electronics Co.* (Civil Action No. 6:09-cv-00203 E.D. Tex.). *See* Supp. Exs. A & B.

⁴ The certification of payment and waiver of Bermuda defenses and escrow of *future* royalties are in no way a substitute for Marvell posting a supersedeas bond or providing other adequate security under Rule 62 to stay enforcement of the judgment pending appeal, which relates to assuring the collectability of damages, interest, and attorney’s fees associated with *past* infringement.

Both aspects of the foregoing plan are necessary to protect CMU from Marvell's continuing infringement because certification of payment and waiver of defenses does not guarantee that Marvell will have sufficient funds to pay future royalties. Marvell is facing a large judgment for past infringement, but nevertheless continues to empty its corporate treasury. Regardless of the legitimacy of the underlying reasons, Marvell admits that it has returned billions of dollars to shareholders in recent years through stock repurchase and dividend programs. *See* Dkt. 837 at 8-9. Marvell also does not dispute that, for several quarters, it has returned more money to shareholders than it has generated from operations.⁵ *Id.*; *see also* Supp. Ex. C (updated C. Lawton summary of Marvell financial information). Marvell further admits in its SEC filings that paying the \$1.17 billion damages award could have "a material adverse effect on our business, financial condition, results of operations and cash flows." *See* Supp. Ex. D (Marvell's 2013 10-K) at 19. Thus, taking Marvell at its word that it will pay the award for *past* damages (including any enhancement, interest, or attorney's fees that the Court may award), there is a serious risk that Marvell, with its repurchase program still running at full throttle, will be unable to also pay royalties for *future* infringement, especially because Marvell asks for permission to continue to infringe *for years*.

2. Marvell Fights Strawmen in Attempting to Respond to CMU's Evidence Establishing Irreparable Harm and the Inadequacy of Monetary Damages.

All of Marvell's other arguments on irreparable harm are completely irrelevant and/or based on inapplicable legal standards. Marvell's lead argument is that CMU faces no irreparable harm because it does not compete with Marvell, Dkt. 837 at 2, but competition between the parties is not a necessary predicate for a permanent injunction. *See eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 393 (2006). Lack of competition says nothing about collectability.

⁵ Marvell's earnings guidance for the first quarter of fiscal year 2014 (February-April 2013) indicates that it intends to repurchase approximately 37.1 million shares this quarter alone, which, at the current price of about \$10 per share, amounts to \$371 million. *See* Supp. Ex. E (C. Lawton summary of Marvell projected and actual EPS). Even before accounting for any dividends paid to shareholders, the cash spent on these share repurchases will again dwarf operating profits. *Id.*

Marvell argues next that “CMU [cannot] show the ‘causal nexus’ between its patented feature and consumer demand for the accused chips.” Dkt. 837 at 3. But, the “causal nexus” requirement applies only to preliminary injunctions.⁶ Even if the “causal nexus” requirement were applicable to permanent injunctions, CMU has met that standard, which merely requires a link between the infringement and the irreparable harm. *See Apple*, 695 F.3d at 1374. Marvell’s continued willful infringement of CMU’s patents is directly connected to the risk that a damages award will be uncollectible and CMU will be deprived of any remedy whatsoever for future infringement. *See* Dkt. 787 at 1-3, 9-10.

Finally, Marvell’s argument regarding CMU’s licensing practices, *see* Dkt. 837 at 5-6, ignores the type of irreparable harm asserted by CMU. CMU’s willingness to license its inventions does not justify saddling it with a compulsory license with real collection risks.

3. Marvell’s Request for a Transition Period Moots Its Arguments on the Balance of Hardships and Public Interest Factors.

If the Court is inclined to permit Marvell to infringe during a two-year transition period, Marvell’s arguments on the balance of hardships and public interest factors are mooted. *See* Dkt. 837, at 9-13; *see also Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 704 (Fed. Cir. 2008). Marvell claims that, within two years, it will implement a purportedly noninfringing design-around of CMU’s patents in the next generation C11000 chips.⁷ *See* Dkt. 837, at 10-13. An injunction permitting Marvell and its customers to continue to infringe (subject to an escrowed

⁶ The Federal Circuit applied the “causal nexus” requirement while considering a *preliminary* injunction, *see Apple Inc. v. Samsung Electronics Co.*, 695 F.3d 1370, 1374 (Fed. Cir. 2012); *Apple Inc. v. Samsung Electronics Co.*, 678 F.3d 1314, 1325 (Fed. Cir. 2012), but its most recent decisions on *permanent* injunctions do not mention this requirement. *See, e.g., Presidio Components, Inc. v. Am. Technical Ceramics Corp.*, 702 F.3d 1351 (Fed. Cir. 2012); *Edwards Lifesciences AG v. Core Valve, Inc.*, 699 F.3d 1305 (Fed. Cir. 2012). Neither the Supreme Court nor the Federal Circuit has ever required a causal nexus to obtain a *permanent* injunction. This issue is currently before the Federal Circuit. *Apple Inc. v. Samsung Electronics Co.*, 2013-1129 (Fed. Cir.).

⁷ Dr. Zining Wu effectively admits Marvell’s sales cycle comports with Dr. Bajorek’s description. *Compare* Dkt. 837-3 (Z. Wu dec.) at ¶¶ 7-13 *with* 12/4/12 Tr. at 66:17-68:11; 103:22-104:5 (C. Bajorek testimony).

payment of royalties) for two years before switching to allegedly noninfringing chips would not negatively affect Marvell or its customers. Thus, the balance of hardships and public interest factors further favor CMU if a transition period is permitted.

4. The Court Should Grant CMU the Right to Monitor Marvell's Compliance with a Permanent Injunction.

Given the inherent speculation in Marvell's design-around claim, the Court should grant CMU monitoring rights to police compliance with any permanent injunction until CMU's patents expire on April 3, 2018.⁸ *See, e.g., Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 776-77 (Fed. Cir. 1993); Supp. Ex. F (*Transocean Offshore Deepwater Drilling Inc. v. GlobalSantaFe Corp.* (4:03-cv-02910 S.D. Tex.) Dkt. 266), at 2-3. For monitoring to be effective, the Court should order Marvell to (1) provide CMU with a bi-annual sworn statement identifying chips under development or sold, and (2) with respect to each new chip designed, taped out, made, and/or sold, allow CMU access to Marvell documents and engineers to ascertain the operation of the chip. This monitoring is necessary because:

- Absent monitoring, CMU would have insufficient information to evaluate whether Marvell continues to infringe because Marvell's designs are kept secret. *See* 12/12/12 Tr. at 61:16-62:1; 62:19-63:21 (Z. Wu testimony).
- Marvell's claim that its next generation C11000 chips will be noninfringing cannot be evaluated without monitoring rights. *See MercExchange, L.L.C. v. eBay, Inc.*, 500 F. Supp. 2d 556, 575 n.16 (E.D. Va. 2007). Dr. Wu states that Marvell is "altering the design of the C11000 read channel to have the NLD circuitry permanently and irreversibly disabled," but he never says that the re-designed C11000 chips will not still infringe. *See* Dkt. 837-3 at ¶ 11. Further, because the new design will not be finished for at least six to eight months, *id.* at ¶ 12, Marvell can only speculate about customers' acceptance of re-designed chips. If customers reject them, Marvell will, presumably, keep selling its current chips – *e.g.*, the 10000 series – with the infringing NLD feature.
- Monitoring will allow CMU to ensure that Marvell does not simply design-around the Asserted Claims from CMU's patents while infringing other claims. For example, it will be particularly difficult for Marvell to avoid infringing claim 19

⁸ The Court should reject Marvell's request that it require CMU to post an injunction bond. Bonds are required only for temporary restraining orders and preliminary injunctions, *not permanent injunctions*. *See, e.g., Forest Park II v. Hadley*, 336 F.3d 724, 734 (8th Cir. 2003).

of the '180 patent, which does not require a "Viterbi-like detector" or even the computation of "branch metric values" but does cover an iterative decoder. *See* P-2 at col. 16:31-38, 45-46.

B. The Court Should Reject Marvell's Delay Tactics, Including Its Request for an Evidentiary Hearing, Because Marvell Cannot Stop Infringing.

Marvell's proposal regarding setting ongoing royalties would unnecessarily prolong the proceedings in this Court. Contrary to Marvell's assertion, *see* Dkt. 837 at 14-15, the Court can efficiently set an ongoing royalty rate as part of an overall resolution of post-trial motions.

Marvell's suggestion that the parties should be given the opportunity to negotiate a license after the Court decides post-trial motions is a transparent delay tactic. CMU has already satisfied any obligation to negotiate. Marvell rejected as "premature" CMU's request to negotiate an ongoing royalty. *See* Dkt. 837-11. Marvell, however, has never explained how the parties' positions would be different after the Court rules on post-trial motions. If past practice is any indication, Marvell will not cede any ground based on those rulings, which are certain to be appealed. More "negotiations" would waste the parties' time and delay an inevitable appeal.

Marvell's demand for yet another evidentiary hearing, *see* Dkt. 837 at 15, likewise will entail unnecessary delay. As with its request for a hearing on laches, Marvell fails to specifically identify any new evidence that it would present at such a hearing.

More importantly, Marvell's papers contain a key admission that makes such a hearing just another "wild goose chase." CMU demonstrated at trial (and the jury found) that CMU's patented technology was "must have," "life or death" for Marvell, and became industry standard. *See* Dkt. 829, at 9-12. As Marvell describes its present circumstances, ***nothing has changed***, and this fact necessarily would dominate any hypothetical negotiation of an ongoing royalty after the verdict in late 2012, resulting in a rate of \$0.50 per chip (or higher) as a "survival premium."⁹

⁹ Arguing that its profit margin suggest an ongoing royalty rate lower than \$0.50 per chip, Marvell ignores the testimony of Ms. Lawton (*see* 12/10/12 Tr. at 105:22-107:20), and misrepresents a chart depicting the company's prices and profit margins created by Ms. Lawton (P-Demo 16 at 6). *See* Dkt. 837, at 17-18. Consistent with Ms. Lawton's testimony, Slide 6 of P-Demo 16 reflects that, although there are peaks and valleys in Marvell's profit margins, ***its***

Specifically, Marvell admits that it cannot stop infringing without destroying its own reputation and business, disrupting its customers' business, and causing devastating ripple effects through all industries that use hard drives. *See* Dkt. 837 at 9-12. Although Marvell claims that it will “permanently and irreversibly” disable the accused NLD feature in its C11000 chips, those (unproven and possibly still infringing) chips are not “slated for volume production” until the end of **2014** (assuming that customers accept chips without the NLD). *See* Dkt. 837-3 at ¶¶ 11-13. Thus, at any post-verdict hypothetical negotiation, the parties would recognize that Marvell (still) must license CMU's patents for at least the next two years. They also would recognize that Marvell has no present intention of using CMU's technology in future products and, therefore, CMU would seek to maximize royalties over that short period. The result: a royalty of \$0.50 per chip or higher.¹⁰ *See, e.g., Fresenius USA, Inc. v. Baxter Int'l, Inc.*, No. C 03-1431, 2012 WL 761712, at *12 (N.D. Cal. 2012).¹¹

C. Marvell's Argument That an Ongoing Royalty Cannot Be Increased to Account for Willfulness Is Wrong.

Marvell wrongly argues that it would be improper for the Court to set an enhanced ongoing royalty rate based on Marvell's continued, post-verdict infringement of CMU's patents, ***which Marvell does not even dispute is willful.*** *See* Dkt. 837, at 19. Marvell's argument fails. First, several courts have expressly “enhanced” the ongoing royalty rate for post-verdict “willful” infringement. *See* Dkt. 787 at 16 (citing cases); *Fractus, S.A. v. Samsung Electronics*

profit margins have clearly increased over time. This rising profitability supports a higher ongoing royalty under the *Georgia-Pacific* factors. *See Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1335 (Fed. Cir. 2009).

¹⁰ Marvell's argument (Dkt. 837 at 19) that Ms. Lawton testified that “any royalty higher than \$0.42 would render Marvell's profit margins insufficient to continue operating its business” is grossly inconsistent with her actual testimony. *See* Dkt. 829 at 13.

¹¹ The Court also should deny Marvell's request to defer an accounting for supplemental damages until after post-trial motions or to reject such damages as excessive. CMU is merely asking the Court to find that it is entitled to an accounting (*see* Dkt. 787 at 17-18); that decision should be made as part of the resolution of post-trial motions. If necessary, the accounting can be conducted separately by a special master. In addition, Marvell supplies neither authority nor reasoning supporting its argument that CMU is not entitled to an accounting, so the Court should reject it.

Co., Nos. 6:09–CV–203, 6:12–CV–421, 2013 WL 1136964, at *2–*3 (E.D. Tex. March 15, 2013). Second, courts typically set an ongoing royalty rate *higher than* the jury’s rate. See Dkt. 787 at 13, 16 (citing cases). Third, numerous cases recognize that a verdict of infringement of valid patents substantially strengthens the plaintiff’s bargaining power in a post-verdict hypothetical negotiation of an ongoing royalty, regardless of whether the defendant’s continued infringement is expressly termed “willful.” See, e.g., *ActiveVideo Networks, Inc. v. Verizon Communications, Inc.*, 694 F.3d 1312, 1342–43 (Fed. Cir. 2012). Finally, Marvell simply ignores that (1) in *Amado v. Microsoft Corp.*, 517 F.3d 1353 (Fed. Cir. 2008), the Federal Circuit stated that the jury’s royalty rate is the *floor* from which the district court determines a (potentially much higher) post-judgment royalty rate based on the fact that the defendant is now an adjudged infringer (even assuming post-verdict willfulness is not considered), *id.* at 1363 & n.2, and (2) on remand, the district court trebled the jury’s running royalty rate. *Amado v. Microsoft Corp.*, No. SA CV 03–242, 2008 WL 8641264, at *11 (C.D. Cal. Dec. 8, 2008).

III. CONCLUSION

For the foregoing reasons, and those set forth in CMU’s initial brief, CMU respectfully requests that the Court enter the Proposed Order attached to its Motion.

Respectfully submitted,

Dated: April 12, 2013

/s/ Christopher M. Verdini

Patrick J. McElhinny Pa. I.D. # 53510
patrick.mcelhinny@klgates.com
Mark Knedeisen Pa. I.D. #82489
mark.knedeisen@klgates.com
Christopher M. Verdini Pa. I.D. # 93245
christopher.verdini@klgates.com
K&L Gates LLP
K&L Gates Center
210 Sixth Avenue
Pittsburgh, PA 15222
Phone: (412) 355-6500

Douglas B. Greenswag (admitted *pro hac vice*)
douglas.greenswag@klgates.com
925 Fourth Avenue, Suite 2900
K&L Gates LLP
Seattle, WA 98104-1158
Phone: 206.623.7580

Counsel for Plaintiff, Carnegie Mellon University

CERTIFICATE OF SERVICE

I hereby certify that on April 12, 2013 the foregoing was filed electronically. Notice of this filing will be sent to all parties by operation of the Court's electronic filing system. Parties may access this filing through the Court's system.

/s/ Christopher M. Verdini

Christopher M. Verdini Pa. I.D. # 93245

christopher.verdini@klgates.com

K&L GATES LLP

K&L Gates Center

210 Sixth Avenue

Pittsburgh, PA 15222

Ph (412) 355-6500

Fax (412) 355-6501