

**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 MOTION FOR A FINDING OF
WILLFUL INFRINGEMENT AND ENHANCED DAMAGES**

Pursuant to 35 U.S.C. § 284, Plaintiff Carnegie Mellon University (“CMU”), by and through its undersigned counsel, hereby moves this Court for an order that (1) finds that the infringement by Defendants Marvell Technology Group, Ltd. and Marvell Semiconductor, Inc. (collectively, “Marvell”) of Claim 4 of U.S. Patent 6,201,839 (“the ‘839 patent”) and Claim 2 of U.S. 6,438,180 (“the ‘180 patent”) (collectively “the CMU Patents”) was both objectively and subjectively willful, and (2) enhances CMU’s damages in order to deter and punish Marvell’s unabated willful infringement.

In support of this Motion, CMU states as follows:

1. The jury in this matter found, following the four-week trial, that:
 - a. Marvell did not establish that Claim 4 of the ‘839 patent or Claim 2 of ‘180 patent are invalid. Dkt. 762 at Questions 15 and 16.

- b. Marvell had actual knowledge of the CMU Patents (the '839 patent and the '180 patent) prior to the commencement of this lawsuit. *Id.* at Questions 19 and 22.
- c. Prior to the commencement of this lawsuit, Marvell had no objectively reasonable defense to CMU's claim of infringement. *Id.* at Questions 20 and 23.
- d. Marvell actually knew or should have known that its actions would infringe the CMU Patents. *Id.* at Questions 21 and 24.
- e. The accused Marvell products, namely Marvell's MNP and NLD-type chips, their simulators, and the KavcicViterbi simulator, each infringe Claim 4 of '839 patent and Claim 2 of the '180 patent, and Marvell infringes the foregoing claims directly under 35 U.S.C. § 271(a), by inducement under 35 U.S.C. § 271(b), and by contributory infringement under 35 U.S.C. § 271(c). *See id.* at Questions 1-14.
- f. Compensatory damages for Marvell's unlicensed use of the methods of Claim 4 of '839 patent and Claim 2 of the '180 patent are \$1,169,140,271. *See id.* at Question 17.

2. Marvell was on notice of one or both of the CMU Patents as a result of at least three separate events:

- a. Mr. Gregory Burd of Marvell discovered the '839 patent no later than January 3, 2002, and he twice reported his discovery in writing to his superiors, including, Nersi Nazari, a Marvell vice president. *See* P-280 and P-283.

- b. In August 2003, Marvell's Chief Technology Officer, Dr. Pantas Sutardja, and General Counsel, Mr. Matthew Gloss, received letters from CMU notifying Marvell of the CMU Patents and enclosing the patents themselves. *See* P-422 and P-431.
- c. In November 2004, Fujitsu Limited wrote to Marvell (1) giving Marvell notice of the CMU patents, (2) referencing the Marvell "5575M" and "7500M" read channel chips (both MNP chips); (3) requesting an opinion about the relationship between the CMU patents and Marvell's read channel products together with "the specific grounds/reasons for such opinion." *See* P-477.

3. Despite actual knowledge of the CMU Patents, Dkt. 762, Marvell's engineers and executives did not take objectively and commercially reasonable actions to investigate the scope of the CMU Patents and whether they might cover one or more of Marvell's read channel products and/or simulators, including neither (i) reading the claims of the CMU Patents nor (ii) reviewing the patent prosecution histories of the CMU Patents.

4. Marvell had a corporate policy that required it to consult with its in-house counsel regarding the infringement risk posed by third-party patents such as the CMU Patents. *See* JX-C at 9-10. Despite this policy, Marvell's engineers and executives never sought a determination by or an opinion of counsel regarding Marvell's potential infringement of the CMU Patents or whether Marvell had any defenses to a claim of infringement.

5. Marvell deliberately copied the published papers of inventors of the CMU Patents, Drs. Aleksandar Kavcic and José M. F. Moura, and the CMU Patents (which are substantially similar in all material respects to the inventors' published papers) to design and

develop its KavcicViterbi simulator, its MNP-type chips and simulators, and its NLD-type chips and simulator. As the jury found, all these products infringe Claim 4 of the '839 patent and Claim 2 of the '180 patent.

6. Prior to the commencement of this action by CMU, Marvell took no remedial measures to design around the CMU Patents or otherwise take steps to avoid infringement.

7. Subsequent to the filing of this action by CMU in March 2009, Marvell failed to alter its infringing conduct in any way, and has stated both prior to the jury's verdict and immediately thereafter (*see* Ex. 2 of the Declaration of Mark G. Knedeisen in Support of this Motion) that it no plans to stop its infringement of the CMU Patents.

8. Marvell acted despite an objectively high likelihood that its actions constituted infringement of a valid patent, and therefore, Marvell's infringement was objectively reckless. *See Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003 (Fed. Cir. 2012).

9. The noninfringement defenses pressed by Marvell through trial were not objectively reasonable.

10. The only invalidity defenses that Marvell pressed through trial were based upon a single patent, U.S. Patent 6,282,251, with Glen Worstell as the named inventor ("the Worstell patent"). Marvell offered no evidence that it was aware of or analyzed the Worstell patent prior to commencement of this litigation, and the evolving positions of Marvell and its expert witness on validity demonstrated that it was not objectively reasonable for Marvell to rely upon those defenses during this litigation.

11. Because Marvell actually knew of the CMU Patents and knew or should have known that its actions would infringe the CMU Patents, *see* Dkt. 762 at Questions 19-24, Marvell's infringement was subjectively willful.

12. The purpose of enhanced damages under 35 U.S.C. § 284 is to deter and punish egregious conduct of the infringer as well as "protection of the integrity of the patent system." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 762 F.Supp.2d 710, 719 (D. Del. 2011); *see also Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 37 (Fed. Cir. 2012).

13. The decision to enhance damages under § 284 involves a two-step process: (1) a determination of the infringer's culpability; and (2) a determination of whether and to what extent damages should be enhanced given then the totality of the circumstances. *See Whitserve*, 694 F.3d at 37. A finding of willfulness can satisfy the culpability requirement and "is, without doubt, sufficient to meet the first requirement to increase a compensatory damages award." *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1005 (Fed. Cir. 2012) (citing *In re Seagate Tech. LLC*, 497 F.3d 1360, 1368 (Fed. Cir. 2007) (*en banc*)). Indeed, where infringement is willful, as it is here, the Court must provide a rationale for *not* enhancing damages. *See Jurgens v. CBK, Ltd.*, 80 F.3d 1566, 1572 (Fed. Cir. 1996).

14. Where sufficient culpability on the infringer's part exists, the factors set forth in *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826-27 (Fed. Cir. 1992), guide the evaluation of the egregiousness of the infringer's conduct. *Spectralytics, Inc. v. Cordis Corp.*, 649 F.3d 1336, 1349 (Fed. Cir. 2011) (quoting *Read*, 970 F.2d at 826). Here, all nine of the *Read* factors weigh in favor of enhancing CMU's damages:

- a. Marvell deliberately copied the CMU Patents multiple times.

- b. Marvell failed to investigate the scope of the CMU Patents and had no good faith belief regarding infringement or validity.
- c. Marvell's litigation conduct favors an award of enhanced damages.
- d. Marvell is a large publicly-traded corporation with ample assets and revenue.
- e. The jury found for CMU on all questions of infringement and validity and it awarded CMU the entire amount it sought in damages. *See* Dkt. 762.
- f. Marvell's infringement began in 2001 and continues today.
- g. Marvell presented no evidence of any attempt to design around the CMU Patents and has no plans to stop its infringement.
- h. Marvell demonstrated a motive to harm CMU in that it infringed CMU Patent without a good-faith belief that the CMU Patents were invalid.
- i. Marvell concealed its misconduct.

15. Given Marvell's conduct, the Court should exercise its discretion under 35 U.S.C. § 284 and enhance CMU's damages up to treble the amount awarded by the jury.

WHEREFORE, CMU respectfully requests this Court to enter an order (1) finding that Marvell's conduct satisfies both the subjective and objective prongs of willfulness and, therefore, that Marvell has willfully infringed CMU's patents, and (2) enhancing CMU's compensatory damages. An order including proposed findings of fact and conclusions of law is attached.

Respectfully submitted,

Dated: February 11, 2013

/s/ Mark Knedeisen

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CERTIFICATE OF SERVICE

I hereby certify that on February 11, 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.

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[PROPOSED] ORDER

AND NOW, on this ____ day of _____ 2013, upon consideration of Plaintiff Carnegie Mellon University’s Motion for a Finding of Willful Infringement and Enhanced Damages (Dkt. __), is hereby ORDERED that said Motion is GRANTED, and in that connection:

WHEREAS, the Court conducted a jury trial in the above-captioned matter from November 26, 2012 to December 26, 2012;

WHEREAS, the jury found, among other things:

- Marvell did not establish that Claim 4 of U.S. Patent 6,201,839 and claim 2 of U.S. Patent 6,438,180 (collectively “the CMU Patents”) are invalid;
- Marvell had actual knowledge of the CMU Patents prior to the commencement of this lawsuit;
- Prior to the commencement of this lawsuit, Marvell had no objectively reasonable defense to CMU’s claim of infringement;
- Marvell actually knew or should have known that its actions would infringe the CMU Patents;

- Marvell’s MNP and NLD-type chips and simulators and the Kavcic Viterbi simulator each infringe claim 4 of U.S. Patent 6,201,839 and claim 2 of U.S. Patent 6,438,180, and that Marvell infringes the foregoing claims directly, by inducement and by contributory infringement; and ,
- Compensatory damages for Marvell’s unlicensed use of CMU’s patented methods were \$1,169,140,271.

Dkt. 762

WHEREAS in connection with its evaluation of the objective prong of the willfulness test set forth in *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003 (Fed. Cir. 2012), the Court now finds:

1. Marvell was on notice of one or both of the CMU patents as a result of at least three separate events:
 - a. Mr. Gregory Burd of Marvell discovered U.S. Patent 6,201,839 no later than January 3, 2002, and he twice reported his discovery in writing to his superiors, including, Nersi Nazari, a Marvell vice president (P-280, P-283);
 - b. In August, 2003, Marvell’s Chief Technology Officer, Dr. Pantas Sutardja, and General Counsel, Mr. Matthew Gloss, received letters from CMU notifying Marvell of the CMU patents and enclosing the patents themselves (P-422, P-431); and
 - c. In November, 2004, Fujitsu Limited wrote to Marvell (1) giving Marvell notice of the CMU patents, (2) referencing the Marvell “5575M” and “7500M” read channel chips; (3) requesting an opinion about the relationship

between the CMU patents and Marvell's read channel products together with "the specific grounds/reasons for such opinion." (P-477).

2. Despite actual knowledge of the CMU Patents, Dkt. 762, Marvell's engineers and executives did not take objectively and commercially reasonable actions to investigate the scope of the CMU Patents and whether they might cover one or more of Marvell's read channel products and/or simulators, including:
 - a. Not reading the claims of the CMU Patents; and
 - b. Not reviewing the patent prosecution histories of the CMU Patents.
3. Marvell had a corporate policy that required it to consult with its in-house counsel regarding the infringement risk posed by third-party patents such as the CMU Patents. Despite said policy, Marvell's engineers and executives never sought a determination by or an opinion of counsel regarding Marvell's potential infringement of the CMU Patents or whether Marvell had any defenses to a claim of infringement.
4. Marvell deliberately copied the published papers of Drs. Aleksandar Kavcic and José M. F. Moura and the CMU Patents (which are substantially similar in all material respects to said published papers) to design and develop its KavcicViterbi simulator, its MNP-type chips and simulators, and its NLD-type chips and simulator. As the jury found, Marvell's KavcicViterbi simulator, its MNP-type chips, its MNP-type simulators, its NLD-type chips, and its NLD-type simulator infringe Claim 4 of U.S. Patent 6,201,839 and claim 2 of U.S. Patent 6,438,180.
5. Prior to the commencement of this action by CMU, Marvell took no remedial measures to design around the CMU Patents or otherwise take steps to avoid infringement.

6. Subsequent to the filing of this action by CMU, Marvell failed to alter its infringing conduct in any way, and has stated both prior to the jury's verdict and immediately thereafter (Marvell Form 8-K, Dec. 26, 2012) that it no plans to stop its infringement of the CMU Patents.
7. Marvell acted despite an objectively high likelihood that its actions constituted infringement of a valid patent, and therefore, Marvell's infringement was objectively reckless.
8. Although not necessary to the Court's finding that Marvell's infringement was willful, the non-infringement defenses pressed by Marvell through trial were not objectively reasonable.
9. Although not necessary to the Court's finding that Marvell's infringement was willful, the only invalidity defenses that Marvell pressed through trial were based upon a single patent on which Glenn Worstell was the named inventor (U.S. Patent No. 6,282,251). Marvell offered no evidence that it was aware of or analyzed the Worstell patent prior to commencement of this litigation, and the evolving positions of Marvell and its expert witness on validity demonstrated that it was not objectively reasonable for Marvell to rely upon those defenses during this litigation.
10. Because Marvell actually knew of the CMU Patents and knew or should have known that its actions would infringe the CMU Patents, Dkt. 762, Marvell's infringement was subjectively willful.

THEREFORE, this Court concludes that, the objective prong of the willfulness test has been satisfied by clear and convincing evidence and that Marvell willfully infringed the CMU Patents, and it is hereby ORDERED that, in accordance to 35 U.S.C. § 284, CMU's compensatory damages

are enhanced by _____. This Court's decision regarding enhancement is made with full consideration of the size of the compensatory damages award, and the Court will revisit it in the event that the Marvell obtains a reduction of the award is appropriate for any reason.

BY THE COURT:

The Honorable Nora Barry Fischer