

**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 MEMORANDUM IN
OPPOSITION TO MARVELL’S POST-TRIAL MOTION FOR JUDGMENT AS A
MATTER OF LAW OR, IN THE ALTERNATIVE, NEW TRIAL ON
NON-DAMAGES ISSUES**

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I. INTRODUCTION

Marvell's motions for judgment as a matter of law ("JMOL") or a new trial on non-damages issues are last-gasp attempts to avoid the compelling evidence of its willful infringement.¹ Indeed, Marvell's brief reveals that Marvell has resigned itself to defeat on infringement and validity and that its only real hope is to avoid enhanced damages.

Marvell's JMOL motions on invalidity and infringement merely refer the Court back to motions that it already denied. Now that the jury has assessed the witnesses' credibility and weighed the evidence, Marvell cannot reasonably hope to prevail on those motions—especially since CMU is afforded every fair and reasonable inference. Marvell's new trial motions on invalidity and infringement are equally flawed because Marvell makes no attempt to argue that the verdict shocks the conscience or would be a miscarriage of justice.

Marvell's motions regarding willfulness fail for several reasons. As to objective willfulness, Marvell ignores seven years of shamelessly reckless conduct and asserts that its disregard for CMU's patents should be excused because its weak defenses "went to the jury." *See* Dkt. 806 at 5. Marvell also overlooks that, even if a reasonable, objective litigant had access to the "Silvus email," it would have disregarded it. The rest of Marvell's defense to objective willfulness depends entirely on (discredited) post-filing conduct. Marvell's arguments regarding subjective willfulness fare no better. Marvell simply ignores CMU's evidence that Marvell knew of and copied the CMU patents while failing to investigate whether it had a viable defense.

Marvell's motion for a new trial due to CMU's alleged "misconduct" is equally meritless. CMU's closing arguments were supported by the record and within the bounds of zealous advocacy and any arguably improper statements were contemporaneously stricken and cured by the Court's instructions. The Court properly declined to grant less draconian sanctions, *see* Dkt. 756, 758, and Marvell provides *no* evidence that the jury was inflamed or did not follow the

¹ Marvell incorporates its prior Rule 50(a) briefing by reference, and in response CMU respectfully incorporates by reference its oppositions to those contentions as well as its opposition to Marvell's previous motion for mistrial, its Memorandum of Law in Support of its Motion for Judgment as a Matter of Law on Invalidity, and its Memorandum in Support of Its Motion for a Finding of Willfulness and Enhanced Damages. Dkts. 721, 729, 732, 750, 757, 793.

Court's instructions such that the Court should now, after the verdict, impose the extraordinary sanction of a new trial. To the contrary, the jury reached its verdict by following the Court's instructions, including at least twelve instructions that attorneys' statements are not evidence and instructions that it could disregard any testimony it found not credible or untruthful. In sum, this is not a case where alleged misconduct was pervasive or egregious, and there is no indication that the challenged conduct influenced the verdict in any way.

II. ARGUMENT

A. Marvell's Validity JMOL and New Trial Motions Should be Denied Because Abundant Evidence Supports the Jury's Findings

1. Marvell's JMOL Motion on Validity Fails

Marvell's JMOL motion of invalidity must be denied unless, after viewing the evidence in the light most favorable to CMU and giving it "every fair and reasonable inference," there is insufficient evidence for a reasonable jury to have found that the asserted claims are not anticipated or obvious. *Energy Transp. Group, Inc. v. William Demant Holding A/S*, 697 F.3d 1342, 1350 -52 (Fed. Cir. 2012); *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153, 1166 (3d Cir. 1993). JMOL "should only be granted '*sparingly*,'" *Gomez v. Markley*, No. 07-868, 2011 WL 2590410, at *4 (W.D. Pa. June 28, 2011) (Fischer, J.) (emphasis added), because the Court must find that "as a matter of law, the record is *critically deficient of that minimum quantity of evidence* from which a jury might reasonably afford relief." *Trabal v. Wells Fargo Armored Serv. Corp.*, 269 F.3d 243, 249 (3d Cir. 2001) (emphasis added); *see also Galena v. Leone*, 638 F.3d 186, 196 (3d Cir. 2011).

Now that the jury has spoken in CMU's favor, there is even more reason to deny Marvell's renewed motion because the verdict shows that the jury rejected Dr. Proakis's testimony as explicitly permitted by the Court's instructions. *See* 12/21/12 Tr. at 57:4-60:2; *see also id.* at 56:13-18; 11/28/12 Tr. at 20:9-21:19. Marvell simply ignores that the jury could properly decide to believe the competing testimony of Dr. McLaughlin instead of Dr. Proakis. *See Energy Transp. Group*, 697 F.3d at 1352 ("[T]he jury assessed the credibility of both sides'

experts, and was entitled to credit [plaintiff's expert's] testimony"); *Pressure Products Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1318 (Fed. Cir. 2010). Here, Dr. McLaughlin's cogent testimony provided the jury with substantial evidence to reasonably conclude that the asserted claims are neither anticipated nor obvious in light of Worstell. See 12/18/12 Tr. at 52-56, 64-73.² Further, Marvell's reliance on Dr. Proakis's testimony is inappropriate on JMOL because the Court must "disregard all evidence favorable to the moving party that the jury is not required to believe." *Spectralytics, Inc. v. Cordis Corp.*, 649 F.3d 1336, 1341 (Fed. Cir. 2011).

2. Marvell's New Trial Motion on Validity is Baseless

Marvell fails to provide *any* argument in support of its new trial motion. Marvell presumably asserts that the verdict is against the clear weight of the evidence, but the Court has discretion to grant a new trial only if the jury's validity determination shocks the conscience and represents a "miscarriage of justice." See *Jackson v. City of Pittsburgh*, No. 07-111, 2011 WL 3443951, at *8 (W.D. Pa. Aug. 8, 2011). "The Court must not substitute its own judgment of the facts and assessment of the witnesses' credibility for the jury's." *Id.*; see also *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1203 (Fed. Cir. 2010) (quoting *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1353 (3d Cir.1991)).³ Marvell cannot meet that standard here.

As CMU has shown,⁴ Marvell's invalidity case went from weak to non-existent after Dr. Proakis's testimony. Among other things, Dr. Proakis admitted that Worstell failed to teach a set of signal dependent branch metric functions, 12/17/12 Tr. at 94:1-95:9, his testimony directly contradicted his prior sworn declaration, *compare id.* at 67:9-20 *with id.* at 88:23-91:20, and he failed to consider secondary considerations of nonobviousness despite acknowledging their relevance, *id.* at 76:1-11. Given the flaws in Marvell's evidence coupled with Dr. McLaughlin's testimony—which Marvell ignores—the jury's verdict does not shock the conscience and no miscarriage of justice will result if the verdict stands. See *Jackson*, 2011 WL 3443951 at *24-25.

² See also Dkt. 750 at 5-7, 11-12; Dkt. 793 at 10-11, n.36.

³ The Federal Circuit reviews determinations on motions for a new trial under the law of the Third Circuit. *Union Carbide Chemicals & Plastics Tech. Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1182 (Fed. Cir. 2002).

⁴ See Dkt. 732; Dkt 793 at 10-12.

B. Marvell's Infringement JMOL and New Trial Motions Should be Denied

1. Marvell's JMOL Motion on Infringement Fails

As set forth in CMU's Opposition to Marvell's Motion for JMOL on Non-Infringement (Dkt. 729), Marvell's JMOL motion should be denied. Further, there is now even more reason to deny Marvell's renewed motion because the verdict clearly shows that the jury rejected the testimony of Marvell's witnesses, as the jury instructions expressly permitted. *See* 12/21/12 Tr. at 57:4- 60:2; *see also id.* at 56:13-18; 11/28/12 Tr. at 20:9-21:19.

Regarding direct infringement, Dr. McLaughlin's detailed testimony (supported by Marvell's own documents and testimony of its engineers) included mapping the asserted claims onto Marvell's MNP-type and NLD-type chips and simulators, as well as the Kavcic-Viterbi simulator. *See, e.g.*, Dkt. 729 at 4-34. Further, Dr. Bajorek described Marvell's pervasive "use" of the accused chips and simulators during the sales cycle in the U.S. *See* Tr. 12/4/12 at 67-108; P-1916; P-1917. On this basis alone, Marvell's JMOL motion on direct infringement fails. *See ActiveVideo Networks, Inc. v. Verizon Communications, Inc.*, 694 F.3d 1312, 1321 (Fed. Cir. 2012). In addition, Marvell's own witnesses provided testimony that favors CMU.⁵ The jury properly relied on that testimony to support its verdict of infringement.

As to indirect infringement, Marvell's contention that CMU "fail[ed] to establish predicate, underlying infringement" is meritless. Dr. McLaughlin analyzed the firmware for drive programs of several customers, showing that the Marvell chips were used in infringing modes. *See* 12/3/12 Tr. at 184-188; P-1913; *see also* P-1914 & P-1915. Teik Yeo of Western Digital testified that Western Digital uses the Marvell chips in infringing modes. *See* JX-B at 3-18. Dr. Bajorek also testified that Marvell's customers use the chips in infringing modes during

⁵ *See* Dkt. 729 at 12, 21-23, 28, 31, 32 n.14 (Drs. Wu and Sutardja's testimony confirmed Dr. McLaughlin's infringement analysis); 12/13/12 Tr. at 268:11-269:10, 243:24-244:2 (Dr. Blahut agreed that Viterbi detectors "output[] a path through the trellis which has the smallest path metric," that "a path metric is a sum of branch metrics" and that "branch metric functions have to do with branches, and branches occur in the trellis."); *id.* at 272-278 (at trial, Dr. Blahut admitted that in his expert report he wrote that the MNP computes a path metric; a conclusion he confirmed in his deposition); *id.* at 288:20 -23 (Dr. Blahut admitted that the MNP computes the difference between two branch metrics); 12/17/12 Tr. at 158-159, 177 (Mr. Burd's testimony that the MNP specification (P-295) says that the non-linear filters sum values "for all the branches" and that the KavcicPP simulator code (P-108) refers to both a "Viterbi" path and an "alternative" path supports CMU's evidence that the MNP uses branches and a trellis).

the sales cycle in the U.S. Tr. 12/4/12 at 72, 85-86; *see also* P-1916; P-1917; P-1920; P-1922.⁶

Ample evidence also supports the jury's findings that Marvell intended to induce and contribute to its customers' infringing use. Marvell derides the substantial evidence of copying, but the jury had the right to accept CMU's copying evidence (*see e.g.*, P-Demo 7 at 13-36). In addition, there is an abundance of *other* evidence of intent, including Marvell's knowledge of the patents and its knowledge or willful blindness to its customers' infringing use (demonstrated by its instructions and collaboration with its customers).⁷ *See* Dkt. 729 at 35-44 (substantial evidence of Marvell's intent and that its MNP-type and NLD-type chips are made for use in infringement with no substantial non-infringing uses); *see also* Dkt. 793 at 2-6; Dkt. 802-2 ¶ 6 (confirming that Marvell "prepares specifications to describe to a customer how to use a chip"). Further, the Court properly instructed on the standard for intent under §§ 271(b) and (c), Marvell did not object to these instructions,⁸ and questions of intent are particularly within the province of the jury. *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 669 (Fed. Cir. 1988).

2. Marvell's Motion for a New Trial on Infringement is Baseless

Marvell fails to even argue that the jury's infringement verdict is against the weight of the evidence, let alone to try to show that the verdict shocks the conscience or results in a "miscarriage of justice." *Finjan*, 626 F.3d at 1203. Marvell's omission is, by itself, fatal to its new trial motion.

Even if Marvell *had* cited the evidence of non-infringement that it offered at trial, its motion would fail. Drs. Wu and Blahut and Mr. Burd either conceded facts establishing infringement or directly contradicted Marvell's "official" documents, prior sworn deposition

⁶ JMOL of no indirect infringement is improper where there is "more than a mere scintilla" of circumstantial evidence of infringing use by the customer (such as instructing customers to use the accused products in an infringing way). *See Lucent v. Gateway, Inc.*, 580 F.3d 1301, 1317 – 19 (Fed. Cir. 2009); *see also* Dkt. 729 at 40, n.30 (citing evidence of Marvell's instructions to customers to use its MNP-type and NLD-type chips in infringing modes); P-1920, 1922.

⁷ *See Smith & Nephew, Inc. v. Arthrex, Inc.*, No. 04-CV-0029, 2013 U.S. App. LEXIS 1038, *10-*14 (Fed. Cir. Jan. 16, 2013) (sufficient evidence supported finding of requisite intent for indirect infringement where: (1) defendant knew of the patent prior to any infringement; (2) after learning of patent, defendant drafted instructions for use; (3) defendant made no attempt to compare its products to the claims of the patent).

⁸ Marvell objected to the inducement instruction on two grounds unrelated to the intent. 12/21/12 Tr. at 179-80.

testimony, and, in the case of Dr. Blahut, his own expert report. *See* Dkt 793 at 6-10. As the Marvell-proposed credibility instruction properly indicated, the jury was entitled to “disregard” Marvell’s self-serving and unsubstantiated non-infringement testimony “in its entirety.” *See* 12/21/12 Tr. at 57:4- 60:2; *see also id.* at 56:13-18; 11/28/12 Tr. at 20:9-21:19.

C. Substantial Evidence Clearly and Convincingly Establishes that Marvell’s Infringement was Both Objectively and Subjectively Willful

For reasons CMU has fully explained,⁹ Marvell’s conduct was objectively reckless and the jury’s finding of subjective willfulness is supported by substantial evidence.

1. Marvell’s Conduct Was Objectively Willful

Marvell’s prelitigation conduct¹⁰ clearly and convincingly establishes that Marvell acted despite an objectively high likelihood that it was infringing CMU’s patents. *See* Dkt. 793 at 2-6, 13-17 (Marvell’s brazen disregard for CMU’s patents and its failure to have any objectively reasonable defenses at the time it began infringing are more than sufficient to satisfy the objective prong); Dkt. 721 at 5-7, 10-20; Dkt 762 at Questions 19, 20, 22, 23.¹¹ Marvell incorrectly argues that the Court need not focus on Marvell’s prelitigation conduct and can consider defenses Marvell ginned up after being sued. *See* Dkt. 741 at 2-3. The Federal Circuit,

⁹ *See* Dkt. 793; Dkt. 721.

¹⁰ The Court must examine the totality of the circumstances, focusing on Marvell’s pre-litigation conduct and defenses. *See In re Seagate Tech. LLC*, 497 F.3d 1360, 1374 (Fed. Cir. 2007) (*en banc*); *CleanCut, LLC v. Rug Doctor, Inc.*, No. 2:08-cv-836, 2013 WL 441209, at *1 - *2 (D. Ut. Feb. 5, 2013); *Univ. of Pittsburgh v. Varian Med. Sys., Inc.*, 877 F. Supp. 2d 294, 306-07 (W.D. Pa. 2012); *CSB-Sys Int’l Inc. v. SAP Am., Inc.*, No. 10-2156, 2012 WL 1439059 at *4 (E.D. Pa. April 25, 2012); *Univ. of Pittsburgh v. Varian Med. Sys., Inc.*, No. 08-01307, 2011 U.S. Dist. LEXIS 149685 at *31, *65-*68 (W.D. Pa. Dec. 30, 2011); *Goss Int’l Americas, Inc. v. Graphic Management Assoc., Inc.*, 739 F. Supp.2d 1089, 1125 -26 (N.D. Ill. 2010); *i4i Ltd. P’ship v. Microsoft Corp.*, 670 F. Supp. 2d 568, 581-82 (E.D. Tex. 2009), *aff’d*, 598 F.3d 831, 860 (Fed. Cir. 2010); *see also* Dkt. 793 at 14; Dkt. 721 at 4-7; Dkt. 652 at 2-6.

¹¹ Marvell overlooks its admissions of continuous infringement in its opening statement and through its own witnesses. *See, e.g.*, 11/28/12 Tr. at 166:14- 167:4 (“Mr. Burd used – and he’ll testify to you about it openly; it’s no secret – where he created in a computer software code that would use the gold standard, . . . , based on the published works of Kavcic and Moura.”); 12/11/12 at 301:21-302:19 (Dr. Wu testified that “Kavcic Viterbi is a simulator that simulates the method proposed by Dr. Kavcic in his paper. . . So we use that simulator to benchmark our own development.”); *see also Finjan Software, Ltd. v. Secure Computing Corp.*, No. 06-369 (GMS), 2009 U.S. Dist LEXIS 72825, *28 (D. Del. Aug. 18, 2009) (evidence that plaintiff’s patents were used as “a road map” to develop infringing products supported finding of objective willfulness). Mr. Burd also testified that he created the KavcicViterbi simulator based on “what Prof. Kavcic was describing” in Prof. Kavcic’s published papers. 12/17/12 Tr. at 137:2-12. Dr. McLaughlin confirmed that the KavcicViterbi simulator infringes, and that the Kavcic paper that Mr. Burd cited in his “KavcicPP” write-up (P-280) is “virtually identical to what’s described in the CMU patents.” 12/3/12 Tr. at 67; *see also id.* at 169:12-173:14.

however, made clear in *Seagate* that “in ordinary circumstances, willfulness will depend on an infringer’s *prelitigation* conduct.” 497 F.3d at 1374 (emphasis added). *Seagate* is still good law, and despite Marvell’s contention, the *Bard* court did not comment or criticize this proposition—let alone overrule it. *See Varian*, 877 F. Supp. 2d at 306-07; *see also supra*, n. 10.

Even if the Court considers Marvell’s litigation defenses to be relevant to its determination of the objective prong, asserting defenses at trial does not preclude a finding of objective recklessness because the reasonableness of those defenses should be “based on the record *ultimately* made in the infringement proceedings.” *Bard*, 682 F.3d at 1008 (emphasis added); *Fractus, S.A. v. Samsung Electronics Co., Ltd.*, 6:09-CV-203, 2012 WL 2505741, * 19 (E.D. Tex. June 28, 2012); *AIA Eng’g Ltd. v. Magotteaux Int’l S/A*, 3:09-CV-00255, 2012 WL 4442665 at *5 - *6 (M.D. Tenn. Sept. 21, 2012); *see also* Dkt. 601 at 4.¹² As CMU demonstrated, the noninfringement and invalidity defenses Marvell presented at trial were so inherently flawed that nearly every Marvell witness contradicted his prior sworn testimony and/or contemporaneous Marvell “official” documents. *See* Dkt. 793 at 6-12, 17-18, 21-22. No objective defendant could reasonably expect such weak defenses to succeed. *Id.*

Marvell’s other arguments are similarly unpersuasive because, at their core, they are not really defenses at all:

- **Silvus Email (DX-189):** Marvell’s heavy reliance on the Silvus email turns the objective prong on its head and illustrates the unreasonableness of its conduct. Marvell’s argument is premised upon an email that the Court found should be given “no weight.” Dkt. 175 at 39 n.13; Dkt. 719 at 3, 6-7. Even if a reasonable litigant had the email (Marvell did not), it would have disregarded it based upon the file histories and claim language that Marvell chose to ignore.¹³ *See* Dkt. 721 at 22-24. Marvell cannot reasonably defend its conduct based on post-litigation access to an email that an objective pre-litigation actor would have ignored.¹⁴

¹² Marvell’s argument that its noninfringement defenses were objectively reasonable “as is evidenced by the fact it went to the jury,” ignores the case law and the Court’s order to the contrary. *See* Dkt. 601 at 4.

¹³ *See* JX-D-1 at pp 5-6 (Mr. Doan testified that he had no particular feeling about the CMU patents); 12/13/12 Tr. at 73:5-73:18 (Dr. Wu testified that he never obtained or read the file history of the CMU patents); 12/17/12 Tr. at 169:12-21 (Mr. Burd admitted that he did not read the claims of the CMU patent he found).

¹⁴ When Dr. Kavcic was cross-examined about the Silvus email, he made clear that he was responding to Mr. Silvus’s specific question: “[D]id *your claim* specify that the data dependent part (DD) happen in the trellis or in a

- **CMU’s Purported “Delay” in Filing Suit:** The timing of the lawsuit is irrelevant to the objective prong because it is not a defense to infringement. *See, e.g., Odetics Inc. v. Storage Technology Corp.*, 185 F.3d 1259, 1272-73 (Fed. Cir. 1999). Alleged “delay” cannot immunize years of reckless prelitigation conduct. Once again Marvell has the law backwards, as the egregious conduct supporting a finding of willfulness in this case actually precludes any finding of laches. *See* CMU’s Memorandum in Opposition to Marvell’s Motion for Judgment on Laches at 21.
- **Validity Was Not a “Close Call”:** Marvell’s “close call” argument fails because “summary judgment rulings do not automatically prove that an objectively reasonable defense has been raised.”¹⁵ Dkt. 601 at 4; *see also* Dkt. 793 at 21-22; Dkt. 721 at 24. To the extent post-litigation defenses are relevant,¹⁶ their reasonableness is judged in light of the entire record. *Bard*, 682 F.3d at 1008. Here, the Court’s “close call” comment came in the context of Marvell’s assertions that Worstell anticipates based initially on a “tap weight” theory and then on a “target value” theory. Dkt. 306 at 1, 15-16. But Marvell failed to proffer *either* theory at trial. *See* 12/17/12 Tr. at 52-82; D-Demo 12. Marvell’s invalidity defense—including Dr. Proakis’s concession at trial that Worstell does not anticipate (under any theory)—was not objectively reasonable. *See* Dkt. 793 at 10-12, 17-18, 21-22.
- **CMU Did Not Retreat From its Prior Positions:** Marvell’s argument that CMU retreated from its initial characterizations of the CMU patents is both wrong and irrelevant. CMU has always asserted that the Kavcic-Moura invention accounts for both signal dependent and correlated noise. *See, e.g.*, P-1 at col. 6:36-39; col. 6:66-7:4 (discussing equation 13 among others, and stating: “*The noise is now considered to be both correlated and signal dependent*”); Dkt. 143 at 158 (4/7/2010 Tr.); Dkt. 188 at 15-16 (4/12/10 Tr.).¹⁷

post-processor?” DX 189 at 2 (emphasis added). Dr. Kavcic testified that his capitalization of the word “not” in his response was “to emphasize that the claim, the claim language talks only about the trellis, and the claim language does not talk about post processor.” 11/30/12 Tr. at 90:7-14. His testimony is consistent with the construction of Viterbi-like and with the fact that a post-processor can (as Marvell’s documents and Dr. Blahut admit) have a trellis.

¹⁵ Similarly, Marvell’s illogical argument that the ruling on CMU’s Group II claims reflects on the reasonableness of its defenses to the Group I claims is misplaced. Infringement is determined on a claim-by-claim basis, and a defense to one claim does not mean there is an objectively reasonable defense to other claims. *See e.g.* Tr. 12/21/12 at 62 and 66 (jury instructions to consider each claim “individually”); *see also Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). To find otherwise would essentially preclude a willfulness finding whenever fewer than all the patent claims are infringed. *See DataQuill Ltd. v. High Tech Computer Co.*, 887 F. Supp. 2d 999, 1019 (S.D. Cal. 2011).

¹⁶ Marvell introduced no evidence that it was even aware of Worstell (or any prior art) prior to this litigation.

¹⁷ Marvell attempts to go outside the record by citing Prof. McLaughlin’s deposition testimony. Dkt. 806 at 7 n.4 Marvell’s conduct is improper, and CMU will not respond here to Marvell’s mischaracterization of Prof. McLaughlin’s testimony.

2. **Abundant Evidence Supports The Jury's Findings of Subjective Willfulness**

Marvell cannot dispute the fundamental facts underpinning the jury's findings of subjective willfulness: (1) Marvell knew of the patents before it built a single chip; (2) it copied the asserted claims into its chips; (3) it failed to investigate the scope of the patents; (4) it failed to obtain an opinion of counsel despite its intellectual property policy to do so; (5) it failed to respond to Fujitsu's specific inquiry about the CMU patents; and (6) it did not stop infringing even after CMU sued. *See* Dkt. 793 at 2-6, 13; *see also* Dkt. 721 at 9-20, 24-27. It is hard to imagine a more compelling case of subjective willfulness. Marvell's motion for JMOL or a new trial on subjective willfulness fails for at least four reasons.

First, Marvell again ignores the standards on Rule 50(b) and Rule 59 motions. For JMOL, not only must Marvell show that CMU's evidence does not provide a legally sufficient evidentiary basis for the verdict (which it cannot), but the Court must "disregard all evidence favorable to the moving party that the jury is not required to believe." *Spectralytics*, 649 F.3d at 1341. Here, when the evidence (if any) favorable to Marvell is disregarded, the jury's findings of subjective willfulness are unassailable. *See* Dkt. 793 at 2-13; Dkt. 721 at 9-20, 24-27. Similarly, Marvell does not (and cannot) make a colorable argument that the jury's verdict of subjective willfulness shocks the conscience or results in a miscarriage of justice.

Second, even if the Court were to credit Marvell's mischaracterization and disparagement of CMU's copying evidence (it cannot properly do so on these motions),¹⁸ Marvell simply

¹⁸ Marvell's dismissal of CMU's copying evidence as a "mere reference to Dr. Kavcic or his model" wholly ignores Dr. McLaughlin's identification of Marvell's circuits as "virtually identical" to and a "cut and paste" from CMU's patents (*see* Dkt. 793 at 4-6; *see also* Dkt. 721 at 15-19) and the fact that the FIR implementation of the CMU patents is covered by the language of the asserted claims. *See* P-Demo 7 at 2; 12/3/12 Tr. at 38:13-40:7. Marvell also ignores that, as to the NLD, Dr. McLaughlin confirmed what Dr. Wu wrote in P-366, that the NLD turned out to be "the original structure that Kavcic proposed in his paper." *See* Dkt. 793 at 6. Finally, Marvell ignores Mr. Burd's admission that he read the "preferred embodiment section" of the CMU patents, which he admitted "was generally following the papers" (P-Demo 7 at 28); Dr. Kavcic's testimony showing how the preferred embodiment of the CMU patent maps onto claim 4 of the '839 patent (P-Demo 3 at 60-66 and 11/29/12 Tr. 229:7-232:10; P-1); and Dr. McLaughlin's testimony confirming Burd's admission regarding the correspondence between Dr. Kavcic's papers and the CMU patent (P-Demo 7 at 28-33; 108 and 12/3/12 Tr. at 67:8-16 and 76:25-79:10). Thus, in addition to Marvell's copying the CMU asserted claims into its MNP and NLD chips, Marvell's admission that the KavcicViterbi simulator was a copy of Dr. Kavcic's paper (gold standard), which Marvell admits to using for benchmarking, is, standing alone, an admission of copying. *See supra* n. 11; *see also* 12/3/12 Tr. at 167; 12/11/12 Tr. at 302:3-6.

ignores all the other evidence that supports the jury's finding of subjective willfulness. *See* Dkt. 793 at 2-4, 13; Dkt. 721 at 10-15.¹⁹

Third, Marvell's argument that the evidence does not show copying because Marvell allegedly believed that CMU's invention was "theoretical" and complicated in contrast to Marvell's "practical solution" is irrelevant to its JMOL motion and falls well short of justifying a new trial. Marvell abandoned its "theoretical" argument when it dropped its enablement and written description defenses,²⁰ and made plain that its complexity argument is baseless when Dr. Blahut admitted that complexity is not part of the test for infringement. *See* Dkt 769 at 1 (dismissing counterclaims of invalidity with prejudice); 12/13/13 Tr. at 279:4-279:24) (Dr. Blahut's admission). Moreover, there is ample evidence from which the jury properly concluded that Marvell's "practical" implementation copied and infringed CMU's patents.²¹

Finally, Marvell's ongoing reliance on its '585 patent²² is unreasonable on its face because, as Marvell agreed, that patent is not a defense to infringement. *See* Dkt. 590 at 18:1-3.²³ As a sophisticated corporation with in-house patent expertise, Marvell cannot now pretend that the application for or grant of its '585 patent reasonably led it to conclude that it does not

¹⁹ Marvell inaccurately claims that "there is insufficient evidence that Marvell *intended* to infringe," Dkt 806 at 8 (emphasis in original), but subjective willfulness requires only that "the objectively-defined risk [of infringement] was either known or so obvious that it should have been known." *Bard*, 682 F.3d at 1005; *Seagate*, 497 F.3d at 1371. Even if intent was required, the jury's findings of induced infringement support its findings regarding subjective recklessness. *See* 12/21/12 Tr. at 74:20 -23 (regarding inducement, the jury was instructed that "if you find that Marvell was aware of the patent[s] but believed that the acts it encouraged did not infringe the patent, . . . , Marvell cannot be liable for inducement.").

²⁰ *See* 35 U.S.C. § 112, ¶ 1 ("The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains... *to make and use the same.*").

²¹ *See, e.g.*, P-366 (noting the NLD ("MNP enhancement") "turns out to be the original structure that Kavcic proposed in his paper."); 12/3/12 Tr. at 193:14- 194:1 (Marvell's iterative decoding technology—not the CMU patents—was too complicated to implement).

²² As CMU predicted, *see* 12/5/12 Tr. at 297:18-22, Dr. Wu both admitted and denied that Marvell's MNP was covered by claim 1 of Marvell's '585 patent (DX-266). *Compare* 12/12/12 Tr. at 66:4-20 *with id.* at 67:3-10.

²³ Marvell's continued (post-verdict) reliance on "defenses" it claims show its good faith belief of noninfringement (i.e., the '585 patent, "complexity," and "theoretical" invention), but which it disavowed or abandoned during this litigation, is itself evidence of Marvell's willfulness. *See* Dkt. 794-1 at 69-73 (Marvell FAQ); *see also SynQor, Inc. v. Artesyn Tech., Inc.*, ___ F.3d ___, 2013 WL 950743, *15 (Fed. Cir. March 13, 2013) (no abuse of discretion for district court to enhance damages based on defendants' "egregious" conduct in continuing, and even increasing, sales of infringing products after the jury verdict).

infringe. Marvell's reliance on Dr Kavcic's 2008 article (DX-310) is similarly unreasonable; it ignores Dr. Kavcic's clear testimony that Marvell must practice CMU's invention for its '585 patent "to work." See 11/30/12 Tr. at 141:17-24, 148:13-149:3; *id.* at 210:12-216:1.

D. Marvell's Allegations of "Misconduct" Do Not Warrant a New Trial

After weighing the evidence and carefully considering the parties' positions over two days of deliberations (separated by four days over the long Christmas weekend), the diligent²⁴ jury arrived at a fair and reasonable result fully supported by the record. This Court should deny Marvell's motion for the extraordinary relief of a new trial because there is absolutely no basis to conclude that the jury was inflamed or that there is *any* probability its verdict was influenced by alleged misconduct. See *Colegrove v. Cameron Machine Co.*, 172 F. Supp. 2d 611, 633-34 (W.D. Pa. 2001) ("[Defendant] does not explain . . . how there is a reasonable probability that the jury was influenced by [plaintiff's] counsel's comment.").

The Court may grant a new trial for alleged attorney misconduct only where "the improper statements made it *reasonably probable* that the verdict was influenced by prejudicial statements." *Union Carbide Chemicals*, 308 F.3d at 1182 (quoting *Greenleaf v. Garlock, Inc.*, 174 F.3d 352, 363 (3d Cir.1999)) (emphasis added). The Court is in the best position to assess any effect of counsel's conduct on the jury's verdict and is thus afforded broad discretion in determining whether conduct is "*so prejudicial* as to require a new trial." *Lightning Lube, Inc.*, 4 F.3d at 1178-79 (emphasis added). The Third Circuit has consistently required that the *entire record should be considered* and misconduct must be "*extremely pervasive and egregious* before a new trial will be granted." *Richmond v. Price*, No. 99-192, 2006 WL 3760535 at *7 (W.D. Pa. Dec. 18, 2006) (emphasis added); see also *Vandenbraak v. Alfieri*, 20 Fed. Appx 185, 189 (3d Cir. 2006).

Here, there is simply *no* evidence that the jury's verdict was the product of (allegedly) inflammatory remarks by CMU's counsel. The jury did not rush to verdict. To the contrary,

²⁴ Both Marvell and the Court recognized the jury's diligence. 12/21/12 Tr. at 8:25-9:8; *id.* at 17:9-24; 12/12/12 Tr. at 236:10-11; 12/13/12 Tr. at 84:4-8; see also 12/21/12 Tr. at 133:17-20; 12/26/12 Tr. at 11:19-23.

they adjourned on Friday afternoon before Christmas and returned five days later on the day after Christmas. *See* 12/21/12 Tr. at 132. The jury’s conduct and questions (e.g., for markers and highlighters)²⁵ show that it carefully considered the evidence and fairly rendered its verdict.²⁶ Further, the Court instructed the jury on at least twelve separate occasions that attorney statements are not evidence.²⁷ Finally, the jury did not reach a compromise verdict but followed the Court’s clear instructions regarding credibility,²⁸ and plainly determined, for example, that Ms. Lawton’s analysis and testimony was credible and that Mr. Hoffman’s was not.

Even without objective evidence related to the jury’s deliberations, Marvell’s motion falls hopelessly short of demonstrating grounds for a new trial because, as CMU has previously explained, it largely hinges on three discrete instances of zealous closing argument that were supported by the record, did not pervade the entire trial, and which do not, individually or collectively, constitute the type of flagrant misconduct that justifies a new trial.²⁹ *See* Dkt. 757; *see also Greenleaf*, 174 F.3d at 364 (three allegedly inflammatory statements during closing argument did “not approach the level of attorney misconduct found to prejudice the jury in our precedents.”); *Dunn v. Hovic*, 1 F.3d 1371, 1377 (3d Cir. 1993) (“[O]ur disapproval of portions of the closing is not enough to warrant reversal” because “at least for civil trials, . . . improper

²⁵ 12/21/12 Tr. at 102:5- 11.

²⁶ It bears noting that the jury did not ask the Court whether it could award more in damages than CMU was requesting or whether it could award attorneys fees. *See Wade v. Colaner*, CIV.A. 06-3715-FLW, 2010 WL 5479629 at *19 (D.N.J. Dec. 28, 2010) (“The Third Circuit has repeatedly stated that a new trial is warranted only upon the showing that the verdict amounted from passion or prejudice, and yet the size of the award alone is not enough to prove prejudice and passion.”) (internal quotation omitted).

²⁷ *See e.g.*, 11/28/2012 Tr. at 16:7-13 (“At the end of all the evidence the attorneys will have the opportunity to make closing arguments. In these arguments they will give you their views of what the evidence proved from the claims asserted. ***These arguments should be given due consideration, but they are not evidence.***”) (emphasis added); *see also id.* at 15:7-18; *id.* at 19:12 -14; *id.* at 94:11- 95:11; *id.* at 129:21-130:7; *id.* at 162:2-17; *id.* at 173:19-25; 12/3/12 Tr. at 177:12-22; 12/10/12 Tr. at 161:13-162:3; 12/11/12 Tr. at 149:6 -7; 12/13/12 at 109:2-13; 12/21/12 at 54:19-20.

²⁸ *See* 11/28/12 Tr. at 20:9-21:19; 12/21/12 Tr. at 56:13-18; *id.* at 57:4-60:2. Of Marvell’s witnesses, it was clear that Drs. Sutardja, Wu, Blahut, and Proakis and Messrs. Hoffman and Burd gave incredible or demonstrably false testimony. *See* Dkt. 792 at 4-7; Dkt. 793 at 7-12. For example, Dr. Sutardja’s claim to have not attended a critical 2002 meeting discussing the “must have” nature of the MNP was contradicted by Marvell’s Mr. O’Dell. *Compare* 12/11/12 Tr. at 117:20-118:25 *with* 12/17/12 Tr. at 233:15-234:7.

²⁹ As described below, Marvell’s other two arguments—CMU’s references to “billions” and Dr. Cohon’s testimony—are meritless distractions contrived to support an argument that “misconduct” pervaded the entire trial.

comments during closing arguments rarely rise to the level of reversible error.”) (internal citation omitted);³⁰ *United States v. Homer*, 545 F.2d 864, 868 (3d Cir. 1976); *Richmond*, 2006 WL 3760535 at *7. Moreover, any alleged impropriety was harmless because the challenged statements were immediately stricken and cured by the Court’s instructions. *See Johnson v. Elk Lake Sch. Dist.*, 283 F.3d 138, 148 (3d Cir. 2002) (“[O]ur system of justice, particularly in the civil context,... ‘relies upon the ability of the jury to follow instructions.’”).

1. CMU’s Opinion of Counsel Argument Was Entirely Proper And Did Not Violate a Court Order

Despite its failure to object to similar earlier statements, during closing argument Marvell objected (and the Court sustained its objection) to CMU’s counsel’s argument that Marvell did not “get an opinion of counsel” and did not “do what [its] company policy says [it] should do.” 12/20/12 Tr. at 142:13-20. Even aside from the fact that this statement was immediately stricken, it does not justify a new trial because: (1) it was entirely supported by the record; (2) it was not contrary to Court’s order; (3) it was relevant to inducement; and (4) Marvell failed to timely object to two similar references made during CMU’s closing and to analogous statements made during CMU’s opening statement.³¹ *See* Dkt. 757 at 5-11, 17-18.

First, Marvell’s argument that CMU mischaracterized the evidence and contradicted the record in making its opinion of counsel argument is simply wrong.³² The Court has already found that Marvell presented *no evidence* that Dr. Wu obtained an opinion of counsel concerning infringement or validity of CMU’s patents: “Further, the facts presented at trial through the

³⁰ In *Dunn*, the Third Circuit found no abuse of discretion even where the district court provided no curative instruction and declined to order a mistrial even though counsel’s closing argument crossed the line when he suggested that defense counsel had lied to jury and that jury should analogize punitive damages to a criminal fine imposed on fraudster Michael Milken. *Id.* at 1376-78.

³¹ In addition, even crediting Marvell with the unobjected-to statements during closing, Mr. Greenswag’s references to Marvell’s failure to get an opinion of counsel constitutes a total of a mere 25 lines in 46 pages of transcript of his closing argument after four weeks of trial. *See Homer*, 545 F.2d at 868 (“questionable comment [that] constituted two small paragraphs in the sixty pages of his closing argument . . . [was] not so pervasive, gross, or inflammatory as to constitute prejudicial error.”); *Greate Bay Hotel & Casino v. Tose*, 34 F.3d 1227, 1236 (3d Cir. 1994).

³² Marvell’s assertion that “CMU had also elicited testimony from . . . Dr. Wu that Marvell had in fact consulted counsel about CMU’s patent,” Dkt. 806 at 12 (citing 12/11/12 Tr. at 323), is totally false. This testimony that Dr. Wu attempted to give came during his *direct examination by Marvell’s counsel*.

testimony of Dr. Wu *do not establish that he received an opinion of counsel, favorable or unfavorable*, with respect to these issues.” Dkt. 753 at 2-3 (emphasis added); *see also* Dkt. 757 at 7-8. Similarly, there is no evidence of record that Mr. Burd (or anyone else at Marvell) obtained any opinion of counsel. *See* 12/17/12 Tr. at 170-174 (striking Mr. Burd’s testimony regarding his alleged communications with Marvell’s patent counsel). Further, Dr. Armstrong testified that Marvell had a policy that when it received any information about patents “to *send that to legal and to have legal analyze the patent and determine what the appropriate next step would be.*”³³ JX-C at 9 (emphasis added). On this basis alone, CMU’s argument that Marvell failed to obtain an opinion of counsel, even though it had a policy to do so, is entirely fair and reasonable. *See, e.g., Brescia v. Ireland Coffee-Tea, Inc.*, 73 F.R.D. 673, 677 (3d Cir. 1977) (in closing argument counsel may argue inferences fairly supported by record evidence); *see also* Dkt. 757 at 6- 8, 17-18.

Second, Marvell misreads the Court’s order, which precluded *Marvell—not CMU*—from making an opinion of counsel argument during closing. *See* Dkt. 753 at 3; Dkt. 757 at 10-11. Indeed, CMU neither violated the Court’s order nor ignored its restrictions. To the contrary, the Court anticipated that CMU would argue that Marvell had failed to obtain an opinion of counsel because it held that it would be “improper for the jury to be *instructed* that it may draw an adverse inference . . .” about the content of such an opinion and resolved to use the 2012 AIPLA instruction that the jury “may not assume that merely because Marvell did not obtain a legal opinion, the opinion would have been unfavorable.” Dkt 753 at 3-4. Even if the Court had precluded CMU from arguing the absence of an opinion of counsel (it did not), CMU’s closing argument would not justify a new trial.³⁴ *Parker-Hannifin Corp.*, 2011 WL 976559 at *11-*12.

³³ It is fair argument to characterize having an attorney “analyze” something and “determine” next steps as a legal opinion. In fact, a “determination” is “an opinion arrived at through a process of reasoning.” *See* Dkt. 757 at 7 n. 2. Further, Dr. Armstrong’s testimony was not in the context of patent prosecution, but in the event that someone at Marvell became “aware of a patent that may cover the technology” that Marvell was using. *See* JX-C at 9.

³⁴ Marvell appears to conflate an argument CMU did not make (i.e., that an undisclosed opinion was likely unfavorable) with the argument CMU did make (that Marvell did not obtain an opinion at all). *See Parker-Hannifin Corp. v. Wix Filtration Corp.*, 1:07 CV 1374, 2011 WL 976559 at *11-*12 (N.D. Ohio Mar. 17, 2011) (“Defendants argue that Plaintiffs improperly argued that their lack of opinion of counsel created a presumption that the opinion

Third, even if CMU’s argument was not permissible to prove Marvell’s willful infringement (which it was), it was proper and relevant to establishing intent for inducement. *See Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 699 (Fed. Cir. 2008) (“It would be manifestly unfair to allow opinion-of-counsel evidence to serve an exculpatory function, . . . , and yet not permit patentees to identify failures to procure such advice as circumstantial evidence of intent to infringe.”); *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 749 F. Supp. 2d 542, 557 (E.D. Ky. 2010).

Finally, CMU’s opinion of counsel arguments are not the type of flagrant misconduct that justifies a mistrial. *Cf. Lucent Techs., Inc. v. Extreme Networks, Inc.*, 229 F.R.D. 459, 462-63 (D. Del. 2005) (counsel persisted with the same misconduct despite a specific warning that it would face a new trial if its conduct continued). Further, Marvell’s own conduct belies its current claim that CMU’s argument is so prejudicial as to warrant a new trial. Marvell failed to object to nearly identical statements made during CMU’s opening. *See* 11/28/12 Tr. at 116:12 - 117:2; 11/28/12 Tr. at 124:15-24. In its own closing argument, Marvell itself argued that it had a policy to let its lawyers know about patents and that Dr. Wu had reviewed the patents with in-house counsel. 12/20/12 Tr. at 78:25- 80:19.³⁵ And, during CMU’s closing argument, Marvell failed to timely object to CMU’s first and third references³⁶ to Marvell’s failure to adhere to its

was or would have been negative. However, Plaintiffs did not make such an argument. They merely argued that the advice of counsel is one factor for consideration and the fact that they failed to present any evidence weighs against them, not that there is any presumption in the law that the opinion would have been negative.”); *see also Retractable Technologies Inc. v. Becton, Dickinson & Co.*, 2:07-CV-250, 2009 WL 8725107 at *3-*4 (E.D. Tex. Oct. 8, 2009). (“Failure to produce an opinion of counsel at trial can be considered by the finder of fact as part of the ‘totality of circumstances’ regarding willfulness. . . . Thus, Plaintiffs should be permitted to introduce evidence or argument of this failure to produce an opinion of counsel at trial...”).

³⁵ The Court overruled CMU’s objection to this argument but cautioned Marvell not to “spend a lot of time on this issue.” *Id.*

³⁶ Marvell acknowledges that it objected contemporaneously to only one of CMU’s three opinion of counsel arguments, but contends that it was not required to object in real time because that would have “elevated the prominence of an improper argument in a juror’s mind.” Dkt. 806 at 14 n.7. This argument strains credulity because Marvell showed absolutely no restraint in objecting to testimony during trial. Moreover, the jury was repeatedly instructed not to consider the reasons for objections or to hold objections against the attorneys. *See* 11/28/2012 at 17:2- 18:5; 12/7/12 at 162:13-163:13; 12/21/12 Tr. at 54:20-25. Marvell’s reliance on *Moody v. Ford Motor Co.*, 506 F. Supp. 2d 823 (N.D. Okla. 2007) is inapposite. That court exercised its discretion under a Tenth Circuit exception to review allegations of misconduct that were not timely objected to, and based on a review of the entire trial transcript, it concluded that “wire-to-wire” misconduct rendered the trial “fundamentally unfair.”

admitted IP policy. 12/20/12 Tr. at 140:14-141:1;³⁷ 12/20/12 Tr. at 143:6-143:9.³⁸ Marvell has waived any objections to CMU's opinion of counsel and IP policy references during opening statements and two of the three statements made during closing. *See, e.g.*, Dkt 753 at 2; *Murray v. Fairbanks Morse*, 610 F.2d 149, 152 (3d Cir. 1979). Consequently, even if CMU's argument was improper, the one sustained objection (12/20/12 Tr. at 142) cannot reasonably be grounds for a new trial in light of the remainder of the record.

2. CMU's Statements Regarding the Chain of Innovation Do Not Justify a New Trial

Describing the 1983 IBM Associates Agreement (DX-17), which was admitted on Marvell's motion, CMU's counsel showed that it provides that third party licenses to DSSC inventions shall be royalty bearing, and "said royalty income shall be utilized at the Center [i.e., the MTC, later the DSSC] to sponsor further research." DX-17 at 4-5; 12/20/12 Tr. at 149. CMU's counsel then argued that the jury should not "allow Marvell to break that chain" of innovation by not paying royalties. 12/20/12 Tr. at 149. In response to Marvell's objection, the Court struck that argument and instructed the jury to disregard it. *Id.* at 166-67; *see also id.* at 161-162 (the Court "was fine" with CMU's use of the language from DX-17 but the rest of the argument was stricken).

This stricken argument does not justify a new trial (alone or in conjunction with the other allegedly offending arguments) because it was consistent with the Court's *in limine* ruling which permitted CMU to argue the economic circumstances of the DSSC at the time of the hypothetical negotiation. Dkt. 608 at 8; *see also* Dkt. 757 at 18-19. These economic circumstances included CMU's long-standing obligation to reinvest third party license proceeds into the DSSC. Indeed, all of the DSSC agreements admitted as evidence (by Marvell) included this same reinvestment requirement. *See* DX-39 (1992 Seagate Associates Agreement) at 2-3; DX-40 (1993 3M

³⁷ Marvell's brief concatenates CMU's first and second statements regarding opinion of counsel and misleadingly presents them as a single argument to which the Court sustained its objection. *See* Dkt. 806 at 13.

³⁸ Marvell fails to even mention CMU's argument regarding the Fujitsu letter in its brief. That omission alone undercuts Marvell's claim that the jury was inflamed by this argument.

Associates Agreement) at 8-9. Moreover, Marvell used these DSSC Agreements as evidence of CMU's views going into the hypothetical negotiation and Dr. Cohon testified about CMU's reliance on licensing revenue. *See* 11/28/12 Tr. at 192-193; 12/12/12 Tr. at 172-175.

Even if CMU's argument did cross the boundary of zealous argument, it did not "engender sufficient prejudice to mandate granting a new trial." *Vandenbraak*, 209 Fed. Appx at 189; *see also Forrest v. Beloit Corp.*, 424 F.3d 344, 352 (3d Cir. 2005) (closing argument that "crossed the line" and flouted the court's prior rulings did not warrant new trial). This is especially true here, where the alleged misstatements were immediately brought to the Court's attention and the jury instructions negate any possible prejudice. *See Vandenbraak*, 209 Fed. Appx at 190 (citing *Edwards v. City of Phila.*, 860 F.2d 568, 575 (3d Cir. 1988)).

Moreover, although Marvell argues the chain of innovation argument was particularly prejudicial because it was made to a Pittsburgh jury,³⁹ the Court specifically instructed the jury not to be influenced by sympathy, prejudice, or emotion. 11/28/2012 Tr. at 51:5-19; 12/21/12 at 45:10-46:11; *id.* at 55:25-56:8. There is *no evidence* that the jury did not follow the Court's instructions. Rather, Marvell itself credited the jury with being diligent and attentive.⁴⁰ *See Colegrove v. Cameron Machine Co.*, 172 F. Supp. 2d 611, 633-34 (W.D. Pa. 2001).

3. CMU's Identify Theft Analogy Does Not Justify a New Trial

Similarly, the identify theft analogy that CMU's counsel started to make but immediately dropped after the Court sustained Marvell's objection does not taint the entire trial or justify a new trial. 12/20/12 Tr. at 167:21-169:21. Even if this analogy could be deemed a "golden rule"

³⁹ Marvell's reliance on regional bias cases is inapposite because at no point during CMU's closing was Pittsburgh even mentioned, nor was any reference made to Marvell's status as an out-of-state, let alone Bermuda, corporation. *Compare, e.g., Whitehead v. Food Max of Miss., Inc.*, 163 F.3d 265, 276 -77 (5th Cir. 1998) (repeated emphasis on defendant being an out-of-state corporation in contrast to local counsel and plaintiff); *Westbrook v. Gen. Tire and Rubber Co.*, 754 F.2d 1233, 1238 (5th Cir. 1985) (continued "us-against-them" pleas "can have no appeal other than to prejudice by pitting 'the community' against a nonresident corporation."). In fact, it was Marvell's counsel who mentioned Pittsburgh during his closing to accuse CMU of trying to play the hometown card. 12/20/12 Tr. at 59:23-60:2. Marvell's counsel also showed the jury an image of a Pittsburgh Penguins game, D-Demo 17 at 163, and twice mispronounced Evgeni Malkin's name in an attempt to pander to a local jury. 12/20/12 Tr. at 103:9-17. Similarly, it was Marvell's counsel who referred to the Steelers and Heinz Field during opening statements. *See* 11/28/12 Tr. at 152:17-153:5.

⁴⁰ 12/21/12 Tr. 8:25-9:8; *see also id.* at 17:9-24.

argument, as Marvell acknowledges, improper “golden rule” arguments are “*rendered harmless* either by an immediate curative instruction” or by a “complete final instruction to the jury concerning its proper role in the determination of liability and damages.” *Edwards*, 860 F.2d at 574 (emphasis added); *see also* Dkt. 806 at 16 n.9. Here, the Court immediately instructed the jury to disregard the analogy, and as described above, it also repeatedly instructed the jury that attorney statements are not evidence and that it had to perform its duties without any bias, sympathy or prejudice. *Supra*, at 12 n. 27, 17.

4. Marvell’s Assertion of a Broad Pattern of Misconduct During Trial is Waived and Baseless

In a last ditch attempt to manufacture an argument that CMU’s alleged misconduct “pervaded the trial,” *Fineman v. Armstrong World Indus., Inc.*, 980 F.2d 171, 206 (3d. Cir. 1993), Marvell asserts for the first time it was prejudiced by CMU’s references to its billion dollar damages claim⁴¹ and by Dr. Cohon’s references to Pittsburgh.⁴² These alleged grounds were not part of Marvell’s mistrial motion and are waived. *See Murray*, 610 F.2d at 152; *see also Cunningham v. Healthco, Inc.*, 824 F.2d 1448, 1458 (5th Cir. 1987); *Bedrock Stone and Stuff, Inc. v. Manufacturers and Traders Trust Co.*, No. Civ.A. 04-CV-02101, 2006 WL 890993, at *5, *10 (E.D. Pa. March 31, 2006). Further, these arguments fail on the merits.

a. CMU’s References to the Billion Dollar Nature of its Claimed Damages Were Not Prejudicial and Were Outnumbered by Marvell’s References to the Same

CMU’s references to “billions”⁴³ did not skew the damages horizon because Marvell

⁴¹ Of the four references to “billion” discussed in its brief, Marvell arguably objected only to one. *See* Dkt. 806 at 18-19. Marvell describes Ms. Lawton’s review of gross margins and operating profits as a means to artificially inflate the damages claim, but Marvell made no objection at the time. *See* 12/10/12 Tr. at 82:3-23. Similarly, Marvell did not object when Ms. Lawton testified that Marvell sold 2.34 billion chips, 12/7/12 Tr. at 61:4-24, but later objected when CMU requested to put that number on the whiteboard (after the jury had already heard the number). *Id.* at 61:25-63:22. Marvell cites a sidebar discussion regarding P-857, where the Court permitted cross-examination of Mr. Hoffman on the exhibit, 12/12/12 Tr. 125:5-127:13, but when Mr. Hoffman provided testimony regarding settlements in excess of a billion dollars, Marvell did not object. *Id.* at 130.

⁴² Marvell’s reference to its objection to Dr. Cohon’s testimony based on the Court’s *in limine* ruling concerning harms to CMU (Dkt. 608) is misleading. That objection, which was overruled, was about CMU’s potential use of licensing revenue, not about inflaming hometown biases. *See* 11/28/12 at 189-192. Also, it was made in response to testimony about CMU being a non-profit university, not the statements Marvell now complains about. *Id.*

⁴³ Marvell objected contemporaneously to only one of the references it cites in its brief. *See* 12/12/12 at 289:19-295:18. That testimony was, however, stricken and cured by the Court’s limiting instruction. *See* 12/13/12 at 101:2-19; *see also Vandenbraak*, 209 Fed. Appx at 190; *Edwards*, 860 F.2d at 575.

itself emphasized the billion dollar nature of this case more than CMU did. According to CMU's count, Marvell made 61 references to a "billion" dollars or chips, whereas CMU only made 51. Notably during opening statements, Marvell mentioned a billion dollars seven times,⁴⁴ and it failed to object to any of CMU's six references to billions of accused chips⁴⁵ or two references to its damages.⁴⁶ During closing arguments, Marvell made thirteen references to billions of dollars⁴⁷ compared to CMU's five references to billions of chips.⁴⁸ Aside from its examination of the damages experts, Marvell introduced repeated references to "billions" during its examinations of Dr. Kavcic, Mr. Wooldridge, and Dr. Sutardja.⁴⁹ Marvell cannot cry foul.

The absurdity of Marvell's "billions" argument is further revealed by the fact that it is utterly illogical to expect that CMU could proceed through trial without referencing the number of accused chips or the damages it sought; indeed Marvell could not even adhere to this standard.⁵⁰ *See also SynQor, Inc.*, 2013 WL 950743 at * 13 (affirming denial of new trial because discussion of \$20 billion end-product sales was not unfair or prejudicial).

b. Dr. Cohon's Testimony was Proper and Far From Prejudicial

Marvell falls far short of establishing that Dr. Cohon's mention of Pittsburgh was so prejudicial that it warrants a new trial. It is entirely expected and natural that Dr. Cohon would reference Pittsburgh as he provided a "little bit of background" about CMU. 11/28/12 Tr. at 191:7 -8; *see also id.* at 190:14-20. The Court specifically permitted Dr. Cohon's background testimony, *id.*, and, correspondingly, permitted Dr. Sutardja to provide similar testimony.⁵¹

⁴⁴ 11/28/12 at 136:5; *id.* at 140:14; *id.* at 177:4; *id.* at 177:6; *id.* at 177:17; *id.* at 179:20-21; *id.* at 179:25.

⁴⁵ *See* 11/28/12 Tr. at 96:7; *id.* at 100:7; *id.* at 103:4; *id.* at 117:1; *id.* at 123:8; *id.* at 125:12-13.

⁴⁶ *See* 11/28/12 Tr. at 123:12; *id.* at 132:21.

⁴⁷ 12/20/12 Tr. at 61:22-23; *id.* at 62:2-3; *id.* at 64:14; *id.* at 68:5-6; *id.* at 71:25; *id.* at 72:9-10; *id.* at 74:3; *id.* at 85:7; *id.* at 85:16; *id.* at 86:16; *id.* at 87:16-17; *id.* at 93:4; *id.* at 107:8.

⁴⁸ 12/20/12 Tr. at 135:22; *id.* at 146:15-17; *id.* at 146:23; *id.* at 172:10; *id.* at 172:18.

⁴⁹ 11/29/12 Tr. at 272 (Dr. Kavcic); 11/30/12 Tr. at 64-66, 78:14, 99:12 (Dr. Kavcic); 12/5/12 Tr. at 127:18, 175:25, 235:10, 235:25 (Mr. Wooldridge); 12/11/12 Tr. at 63:23, 65:11, 65:18 (Dr. Sutardja).

⁵⁰ Remarkably, all of CMU's references to "billions" in its closing (and most in its opening) were couched in terms of the number of chips *Marvell sold*, whereas Marvell's references to "billions" in its opening and closing arguments were all to billions of dollars. If anyone emphasized the billion dollar nature of this suit, it was Marvell.

⁵¹ Dr. Sutardja was permitted to provide background testimony about how Marvell grew from 3 to 7000 employees,

Further, the cases Marvell cites are inapposite because none of Dr. Cohon's references to Pittsburgh come close to disparaging Marvell as an out-of-state corporation. *See* Dkt. 806 at 16 n. 9. (Dr. Cohon actually praised Marvell as being an innovator and recognized that it funded an award a CMU student received. 11/28/12 Tr. at 224:16-23.) It was Marvell that deliberately drew attention to the fact that CMU has a Silicon Valley campus six miles from Marvell's headquarters, 11/28/12 at Tr.207-208; and, during opening statement, specifically called out CMU's campus "in the Middle East, in one of the Arab states, a place called Qatar". 11/28/12 Tr. at 146:9-10. Marvell cannot credibly claim any prejudice from Dr. Cohon's statements.

III. CONCLUSION

For the foregoing reasons, CMU respectfully requests that the Court deny Marvell's Post-Trial Motion for Judgment as a Matter of Law or, in the alternative, New Trial on Non-Damages Issues.

Respectfully submitted,

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12/11/12 Tr. at 53, that Marvell now has been granted 3000 patents, *id.*, that Marvell has won several awards, *id.* at 54, and about "the secret of Marvell's success," *id.* at 55-56.

CERTIFICATE OF SERVICE

I hereby certify that on March 25, 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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