

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

CARNEGIE MELLON UNIVERSITY,

Plaintiff,

v.

MARVELL TECHNOLOGY GROUP, LTD.,
and MARVELL SEMICONDUCTOR, INC.,

Defendants.

Civil Action No. 2:09-cv-00290-NBF

Hon. Nora B. Fischer

**MEMORANDUM IN SUPPORT OF 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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Statutes

35 U.S.C. § 102(e) (now codified as § 102(a)(2))2

Defendants Marvell Technology Group, Ltd. and Marvell Semiconductor, Inc. (collectively, “Marvell”) hereby respectfully seek judgment as a matter of law (“JMOL”) pursuant to Fed. R. Civ. P. 50(b), or, alternatively, a new trial pursuant to Fed. R. Civ. P. 59(a)(1). Marvell has already sought JMOL pursuant to Fed. R. Civ. P. 50(a) (*see* Dkt. 699, 701, 703, 738-43, 743, 747-48), arguing that Plaintiff Carnegie Mellon University (“CMU”) failed to present sufficient evidence for the jury to find in favor of CMU. Recognizing that the Court has already considered those submissions, Marvell respectfully renews and incorporates by reference its above-referenced prior contentions while respectfully directing this Court’s attention to issues that deserve heightened consideration in the wake of trial, especially the insufficiency of the evidence that Marvell’s patent infringement was either objectively or subjectively willful and the justification for new trial based on prejudicial misconduct by CMU’s counsel.¹

LEGAL STANDARD

JMOL may be granted under Fed. R. Civ. P. 50(b) where a party fails to present sufficient evidence for a reasonable jury to rule in its favor. *Galena v. Leone*, 638 F.3d 186, 196 (3d Cir. 2011). “To succeed on a renewed motion for JMOL following a jury trial and verdict, the movant must show that the jury’s findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied by the jury’s verdict cannot in law be supported by those findings.” *Comaper Corp. v. Antec, Inc.*, 867 F. Supp. 2d 663, 667 (E.D. Pa. 2012) (*quoting Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998)).

The decision to grant a new trial pursuant to Fed. R. Civ. P. 59(a)(1) is committed to this Court’s sound discretion “to prevent injustice.” *Greenberg v. Tomlin*, CIV. A. 92-0006, 1993 WL 322069, at *2 (E.D. Pa. Aug. 23, 1993) *aff’d*, 26 F.3d 121 (3d Cir. 1994) (citing *O’Dell v.*

¹ Marvell is filing a separate memorandum in support of JMOL and/or new trial on, or remittitur of, damages.

Hercules, 904 F.2d 1194, 1200 (8th Cir. 1988)); *Grace v. Mauser-Werke GMBH*, 700 F. Supp. 1383, 1387-1388 (E.D. Pa. 1988). A new trial may be granted where a jury's verdict is "contrary to the great weight of the evidence," such that "a miscarriage of justice would result if the verdict were to stand." *Pryer v. C.O. 3 Slavic*, 251 F.3d 448, 453 (3d Cir. 2001).

ARGUMENT

I. MARVELL IS ENTITLED TO JMOL OR NEW TRIAL ON INVALIDITY

Marvell respectfully renews and incorporates by reference its Rule 50(a) motion (Dkt. 747-48) for JMOL on the invalidity of CMU's patent claims. Undisputed evidence established that claim 4 of the '839 patent and claim 2 of the '180 patent are anticipated and obvious in light of prior art—specifically U.S. Patent No. 6,282,251 ("Worstell"), entitled "Modified Viterbi Detector Which Accounts for Correlated Noise." (DX-187). Worstell, assigned to Seagate Technology LLC, discloses a method for determining branch metric values for branches of a trellis for a Viterbi detector (*id.*) and was filed in the U.S. on March 21, 1995, well before Drs. Kavcic and Moura claim to have conceived of their invention and CMU first applied to patent their work. *See* 35 U.S.C. § 102(e) (now codified as § 102(a)(2)). As previously submitted (Dkt. 748 at 3-15), Worstell anticipates each limitation of claim 4 of the '839 patent and claim 2 of the '180 patent: it discloses modified Viterbi detectors that took both correlated noise and signal-dependent noise into account through a modified branch metric covered by the asserted claims. Moreover, any alleged differences between the subject matter covered by those claims (as interpreted by CMU) and the prior art is insubstantial and a matter of routine design choice since the late 1990s. Accordingly, no reasonable jury could have found for CMU on validity.

II. MARVELL IS ENTITLED TO JMOL OR NEW TRIAL ON INFRINGEMENT

Marvell also respectfully renews and incorporates by reference its Rule 50(a) motion (Dkt. 742-43; *see also* Dkt. 703-04) for JMOL of non-infringement. To establish direct infringement,

CMU needed to prove that Marvell's accused chips or simulators meet *each and every* limitation of the asserted claims. Yet CMU failed to prove that the accused MNP and NLV modules in the accused Marvell chips are "Viterbi-like" detectors, that they determine branch metric values for branches of a trellis, or that they perform either the "selecting" or "applying" steps of the recited methods. Further, CMU failed to show that the accused simulators meet the claim elements requiring a "detector" for processing "signal samples." Nor did CMU establish *indirect* infringement of the asserted claims, whether by inducement or contributory infringement. Not only did CMU fail to establish predicate, underlying infringement, but its supposed "copying" evidence (consisting of a handful of isolated references in Marvell documents to "Kavcic") falls well short of proving that Marvell *actually knew* that its accused chips were infringing the specific patent claims at issue, as the Supreme Court has made clear is required. *See Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011); *see also* Dkt. 743 at 12-13.

III. MARVELL IS ENTITLED TO JMOL OR NEW TRIAL BECAUSE THE EVIDENCE FAILS TO SHOW *WILLFUL* INFRINGEMENT

Marvell also respectfully renews and incorporates by reference its Rule 50(a) motion (Dkt. 741; *see also* Dkt. 699-700) for JMOL of no willful infringement. Even if the record were sufficient to support validity and infringement (which it is not), it is insufficient to show that any infringement by Marvell was *willful*, as Marvell previously submitted in its Rule 50(a) motion. Willfulness of patent infringement must be established by *clear and convincing* evidence, not a mere preponderance. *See In re Seagate Techs., Inc. v. Gateway, Inc.*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc); *see also ACCO Brands, Inc. v. ABA Locks Mfg. Co., Ltd.*, 501 F.3d 1307, 1311-12 (Fed. Cir. 2007). And willfulness entails an objective requirement (measured from the vantage point of a hypothetical reasonable defendant) separate and apart from a subjective requirement (measured from the vantage point of the particular defendant). *Bard Peripheral*

Vascular, Inc. v. Gore & Assocs., Inc., 682 F.3d 1003, 1007 (Fed. Cir. 2012); *Seagate*, 497 F.3d at 1371. Objective willfulness tends not to be found “where an accused infringer relies on a reasonable defense to a charge of infringement.” *Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1319 (Fed. Cir. 2010). Tracking “the Supreme Court’s precedent on ‘sham’ litigation,” inquiry into objective willfulness “entails an objective assessment of potential defenses based on the risk presented by the patent.” *Bard*, 682 F.2d at 1006-07. “If an objective litigant could conclude that the suit is reasonably calculated to elicit a favorable outcome, it is *not* objectively baseless.” *Id.* (emphasis added). Subjective willfulness is distinct, and depends upon whether Marvell in fact “knew or should have known of this objectively high risk” of infringement. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 860 (Fed. Cir. 2010).

A. The Court Should Not Find Objective Willfulness

The question of objective willfulness is for this Court and not the jury to decide, *see Bard*, 682 F.3d at 1007, and, where “the objective willfulness prong is not satisfied,” there is no “need [to] examine the jury’s finding on subjective willfulness.” *Apple v. Samsung* (N.D. Cal. Case No. 5:11-cv-01846-LHK) Dkt. 2220 at 28 (finding, on Rule 50(b) motion, that Samsung did not willfully infringe certain Apple design and utility patents and denying enhanced damages for willfulness). This Court should determine that Marvell’s infringement was not objectively baseless, thereby obviating any need to reach the jury’s finding of subjective willfulness.²

To establish “objective baselessness,” a patentee must prove that “no reasonable litigant could realistically expect success on the merits” of any of the accused infringer’s defenses. *Bard*,

² The jury’s advisory verdict on objective willfulness cannot eliminate this Court’s exclusive role in deciding that question, especially as evaluation of the reasonableness of Marvell’s defenses requires legal assessments uniquely within this Court’s grasp.

682 F.3d at 1007. If an objective litigant could conclude that a defense “is reasonably calculated to elicit a favorable outcome,” it is not objectively baseless. *Id.* Marvell's non-infringement and invalidity defenses each provide separate basis for finding an absence of objective willfulness under governing law.

This Court has already endorsed the reasonableness of Marvell's non-infringement contentions, agreeing (Dkt. 443) that Marvell has not infringed CMU's Group II claims. Marvell's non-infringement defenses to CMU's Group I claims are likewise objectively reasonable. For those claims, Marvell primary non-infringement defense was that the claims did not cover post-processor and pre-processor implementations that were outside the trellis. Although the jury found against Marvell on the merits, the defense was by no means objectively baseless—as is evidenced by the fact that it went to the jury. The reasonableness of Marvell's non-infringement defenses is further supported by the fact that CMU's own inventors understood the limits of the “optimal implementation” covered by their claims, and specifically distinguished implementations that addressed signal dependence outside the trellis in a post processor (or in a pre-processor).

In an email sent to Seagate, Dr. Kavcic distinguished the claimed invention from a system incorporating a post-processor solution in combination with a traditional Viterbi detector. DX-189; 11/30/12 Tr. (Kavcic) 84:5-89:4 (for the claimed invention, the “data dependence is in the trellis and NOT in the post processor”). As Dr. Kavcic further explained, during prosecution of the asserted patents, the examiner required the applicants to distinguish the claimed invention from a post processor solution by “writ[ing] extra material to make sure that we do not use a post processor, which is a patent by Kelly Fitzpatrick.” *Id.* Needless to say, an objective litigant could reasonably conclude what the inventor himself ostensibly concluded—namely, that post-

processor implementations were outside the scope of the asserted claims. Indeed, the entire industry similarly understood the limited scope of CMU's patents, for not a single company has ever paid royalties to use the patented technology in a commercial product. *See* 11/28/12 Tr. (Cohon) 229:7-11.³

That CMU waited so long—nearly eight years—before filing its lawsuit also calls into question the merits of CMU's underlying claims. Although CMU now asserts that its patents broadly cover post-processor and pre-processor implementations for dealing with media noise, and that they cannot be designed around, CMU's own inventor did not believe his claims addressed signal dependence outside the trellis in a post processor (or in a pre-processor). Taking CMU's account on faith, it would have become aware of its potential infringement claim years before it filed this suit, sometime in 2006, when Dr. Kavcic reviewed Marvell's MNP patent in connection with an article that he submitted for publication in September 2007. (11/30/12 Tr. (Kavcic) at 175:19-20; DX-310). Even then, however, CMU did not file suit or accuse Marvell of infringement. Instead, Dr. Kavcic described the Marvell technology as “novel.” DX-310. Marvell's non-infringement defense was not objectively baseless.

Quite apart from its noninfringement arguments, Marvell's invalidity defense based on the Worstell prior art provides a separate basis for finding no objective willfulness. The Court has already characterized invalidity as a “close call” on CMU's Group I claims (Dkt. 306 at 1 (“Although it was a ‘close call,’ for reasons stated more fully herein, Marvell's motion [218] is DENIED.”); *see also* Dkt. 337 at 4 (“Although it was a close case, the Court found that the ‘251 Patent did not anticipate the Group I claims.”).) That Marvell's defense presented a “close call”

³ The U.S. Patent Office (“PTO”), too, took the same view: it granted Marvell two patents for its MNP post-processor alternative after Marvell cited and distinguished the two asserted Kavcic patents and an article describing the complex Kavcic model. DX-266, DX-287; *see also* 12/11/2012 Wu Tr. at 324:11-15; 12/12/2012 Wu Tr. at 90:1-15.

on anticipation means it was not “objectively baseless.” *See, e.g., DePuy Spine, Inc. v. Medtronic Solamor Danek, Inc.*, 567 F.3d 1314, 1336 (Fed. Cir. 2009) (finding no willfulness because “the question of equivalence was a ‘close one’”); *Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1374 n.4 (Fed. Cir. 2008) (“[T]he proper claim construction was a sufficiently ‘close question’ to foreclose a finding of willfulness[.]”); *Apple v. Samsung* Dkt. 2220 at 31 (“the closeness of the question suggests that noninfringement was indeed a reasonable defense.”); *see also Spine Solutions, Inc. v. Medtronic Solamor Danek USA, Inc.*, 620 F.3d 1305, 1319-20 (Fed. Cir. 2010) (reversing denial of defendant’s JMOL of no willfulness where the district court had already expressly noted that the defendant’s obviousness arguments were “reasonable”). Given that this dispositive issue made for a “close call,” the entire case could easily have been resolved in Marvell’s favor on summary judgment. It follows that a “reasonable litigant could realistically expect success on the merits” just on the basis of Worstell and Marvell’s invalidity defense. *See Bard*, 682 F.3d at 1007.

The reasonableness of Marvell’s invalidity defense is further underscored by the fact that CMU retreated from its initial insistence that it had been the first to take correlated and signal-dependent noise into account via modified branch metrics in a Viterbi-like detector. Even as narrowed, however, CMU’s position continues to run into the Worstell patent as prior art (*see supra* at Section I). Prof. Proakis’s testimony, coupled with Prof. McLaughlin’s admissions related to the prior art Worstell patent, further confirm that Marvell’s invalidity defense was not objectively baseless.⁴ *See Honeywell Int’l Inc. v. Universal Avionics Sys. Corp.*, 585 F. Supp. 2d

⁴ Marvell’s expert Prof. Proakis testified that the Worstell patent met both the correlated noise and signal dependent noise limitations of the asserted claims. CMU’s expert Prof. McLaughlin did not dispute that the Worstell patent met the claim limitations relating to correlated noise (“applying each of said functions to a plurality of signal samples”). Prof. McLaughlin also agreed that the Worstell patent’s “further modified” metric took into account

636, 644 (D. Del. 2008) (holding the accused infringer’s arguments “substantial, reasonable, and far from the sort of easily-dismissed claims that an objectively reckless infringer would be forced to rely upon.”).

This Court need not agree with Marvell’s non-infringement and invalidity arguments to recognize their objective reasonableness. Because Marvell had reasonable defenses as to both noninfringement and invalidity, either one of which suffices to foreclose a finding of objective willfulness, it should not be liable for willful infringement.

B. The Jury’s Finding Of Subjective Willfulness Lacks Evidentiary Basis

Even if the Court finds objective willfulness, the record fails to support the verdict on subjective willfulness, for there is insufficient evidence that Marvell *intended* to infringe. Far from setting out to infringe CMU’s patents, Marvell developed its own invention, covered by its own patents. (12/11/12 Tr. (Sutardja) at 65:13-19; 12/11/2012 (Wu) at 284:17-285:4; 308:3-5; 322:18-323:8.) Whereas CMU proposed an optimized, theoretical solution, Marvell departed with a practical approach it could commercialize in actual chips. (11/29/12 Tr. (Moura) at 70:22-71:6; 11/30/12 Tr. (Kavcic) at 77:13-18; 79:2-5; 87:16-88:12; 12/11/12 Tr. (Wu) at 284:17-285:9; 299:20-300:13; 301:16-20; 321:7-322:8.) And CMU repeatedly acknowledged that Marvell has established itself as an industry innovator. (DX-1338; 11/28/12 Tr. (Cohon) at 220:14-225:25, 222:19-223:3, 224:3-225:13.)

The record fails to support a finding of subjective willfulness by a preponderance of the evidence, much less the *clear and convincing* evidence that is required. CMU tried to raise an

signal-dependent noise and that it would include a noise value that would vary depending on the standard deviation. (3/23/12 Depo Tr. 371:5-21). This is all that is required to meet the “signal dependent” limitation of the claims. Indeed, Prof. McLaughlin acknowledged that well-known prior art techniques for dealing with signal dependent noise squarely met that limitation as well. *Id.* at 267:20-268:3.

inference of copying by noting (*see* Dkt. 721 at 15-18; 12/3/12 Tr. (McLaughlin) at 54:1-55:2; 56:18-57:11; 82:14-83:5) simply that certain Marvell documents reference Dr. Kavcic's name or the "Kavcic" model. But such references to Dr. Kavcic do not suggest, much less prove, that Marvell was tracking CMU's patents or any specific claim thereof. To the contrary, they reflect standard industry efforts to learn from and improve upon prior patents, which CMU acknowledges are legitimate and commonplace (11/28/12 Tr. (Cohon) at 206:8-15) and which CMU affirmatively encourages (DX-18; 11/28/12 Tr. (Cohon) at 205:14-206:7).

CMU presented no evidence that Marvell was copying any specific embodiment of the asserted claims, as would be required to make evidence of copying relevant to subjective intent. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1366 (Fed. Cir. 2001) ("[E]vidence of copying [the patentee's product] is legally irrelevant unless the [product] is shown to be an embodiment of the claims."); *see Goss Int'l Ams., Inc. v. Graphic Mgmt. Assocs., Inc.*, 739 F. Supp. 2d 1089, 1126 (N.D. Ill. 2010) ("[A]ttempts to keep abreast of a competitor's technology and intellectual property is not objectively reckless behavior, but fair and reasonable commercial behavior.") (internal citations omitted); *see also* Dkt. 443 (Op. Re: Non-Infringement of Group II Claims) at 10 ("[T]he flaw with CMU's position is that admissions by Marvell . . . do not establish that a specific claim element, much less an entire claim, has been copied The clear reason is that each claim protects different technological territory, and some claims may be infringed while others are not."). Marvell's mere reference to Dr. Kavcic or his model in its inventive documents does not translate to clear and convincing evidence that Marvell knew or should have known it was infringing CMU's valid patents. Inferring willful infringement from Marvell's references to Dr. Kavcic is especially unfounded in the face of evidence that draws distinction between Marvell's practical solution to media noise and Dr.

Kavcic's optimized, theoretical solution embodied in CMU's patents. (11/30/12 Tr. (Kavcic) at 77:13-18; 79:2-5; 81:19-22; 76:8 (playing Kavcic Depo. Tr. (7/15/10) at 665:9-15); 12/11/12 Tr. (Wu) at 284:17-285:9; 299:20-300:13; 301:16-20; 321:7-322:8).

In addition, disclosed the CMU patents to the Patent Office in connection with Marvell's patent application relating to its MNP technology. Further confirming that Marvell had a good-faith basis for believing it was *not* infringing, the PTO *agreed* that Marvell's approach was distinct from CMU's patents when it granted Marvell's MNP post-processor alternative patents, with full knowledge of CMU's patents. *See* DX-266, DX-287; 12/11/2012 Tr. (Wu) at 324:11-15; 12/12/2012 Tr. (Wu) at 90:1-15. Even Dr. Kavcic agreed when he described Marvell's solution as "novel" in a 2008 article. (DX-310). In sum, Marvell there was ample, demonstrated, record corroboration for Marvell's subjective, good-faith belief it was not infringing the patents at issue.

IV. CMU'S MISCONDUCT AT TRIAL WARRANTS NEW TRIAL

New trial is warranted when counsel asks questions or makes statements that introduce impropriety or prejudice into a jury's deliberations. *See Fineman v. Armstrong World Indus., Inc.*, 980 F.2d 171, 210-11 (3d Cir. 1992); *Draper v. Airco, Inc.*, 580 F.2d 91, 95 (3d Cir. 1978); *Waite v. Neal*, 918 F. Supp. 133 (E.D. Pa. 1996); *see also Whitserve, LLC v. Comp. Packages, Inc.*, 694 F.3d 10, 34 n.18 (Fed. Cir. 2012) (trusting that the district court on remand would not allow counsel to repeat "blatantly improper statements" about damage awards).

Marvell here renews and reiterates under Rule 59(a)(1) the grounds it set forth for new trial in its December 20 motion for mistrial (Dkt. 756). During closing, CMU's counsel offered improper, misleading, prejudicial commentary calculated to inflame the jury, repeatedly violating clear orders from this Court and exploiting the fact that any curative instruction would

afford little cure⁵ and very likely make matters worse.⁶ Marvell respectfully submits that the correct course in these circumstances is to order a new trial at which CMU and its counsel will hew to this Court's orders and play by the rules, lest CMU and its counsel benefit from their knowing misconduct. This Court's enforcement of limits on inflammatory argument is especially important when a jury in CMU's home town has rendered a jaw-dropping \$1.17 billion judgment in CMU's favor.

A. CMU's Closing Improperly Argued That Marvell Had Violated Its Own Policy To Consult Counsel And That Marvell Had Failed To Obtain An Opinion Of Counsel

CMU mischaracterized the evidence and violated this Court's Order by arguing in closing that Marvell had violated its own internal policy to consult counsel in connection with relevant patents. Contrary to CMU's argument, Marvell's policy did *not* require a written opinion of counsel. As Marvell Vice President of Marketing Dr. Armstrong testified:

Q. Does Marvell have a policy with respect to how it deals with information about patents that may cover some of its products?

A. Can you be more specific?

Q. Well, when Marvell identifies a patent that may be relevant to some of its products, for example, it's storage products, does it have a policy as to how it addresses that issue?

⁵ Although the conduct warranting a new trial "may be inflicted in a moment," subsequent attempts at correction are more often than not incapable of removing the prejudice suffered by the opposing party. *United States v. Zehrback*, 47 F.3d 1252, 1267 (3d Cir. 1995). This is the proverbial "skunk in the jury box." *O'Rear v. Fruehauf Corp.*, 554 F.2d 1304, 1309 (5th Cir. 1977) ("[Y]ou can throw a skunk into the jury box and instruct the jurors not to smell it, but it doesn't do any good.").

⁶ Curative instructions may serve only to emphasize the error, making a new trial even more appropriate. *Simmons v. Diguglielmo*, CIV. A. 08-5911, 2009 WL 2835261, at *12 (E.D. Pa. Aug. 28, 2009) (citing *Marshall v. Hendricks*, 307 F.3d 36, 39 (3d Cir. 2002); *Moore v. Morton*, 255 F.3d 95, 119 (3d Cir. 2001)); *Lasar v. Ford Motor Co.*, 399 F.3d 1101, 1115 (9th Cir. 2005) (finding mistrial warranted where the violation resulted in prejudice to the opposing party and the curative instruction "would have brought only more attention to the matter") (citing *Pullman v. Land O'Lakes, Inc.*, 262 F.3d 759, 762 (8th Cir. 2001)).

....

THE WITNESS: Any information we might get about patents, either externally or internally, *the policy would be to send that to legal and to have legal analyze the patent and determine what the appropriate next step would be.*

BY MR. McELHINNY:

Q. Okay. And do you know whether that happened here in connection with the Carnegie Mellon patents that are at issue?

....

THE WITNESS: I do not know.

BY MR. McELHINNY:

Q. Who would know that?

A. The information would be in legal.

(6/23/10 Armstrong Dep. at 294:14-295:18 (emphasis added)).

CMU had also elicited undisputed testimony from Marvell Vice President of Data Storage Technology Dr. Wu that Marvell *had in fact* consulted counsel about CMU's patent:

Q. Okay. Back in 2002 when you became aware of Dr. Kavcic's patent, did you review the patent at that time?

A. *I reviewed the patent with our internal patent attorney.*

Q. At Marvell?

A. At Marvell.

Q. And who was that?

THE COURT: Dr. Wu, let me instruct you, to the extent that you talked to the attorney about the patent, *anything that relates to your communications with the attorney, or his or her to you, is privileged, and you can't talk about it.*

Q. So, you can provide the name of the person?

A. Mr. Eric Janofsky.

(12/11/12 Tr. at 323:9- 24 (emphases added)).

CMU's counsel argued to the jury in closing that Marvell had *violated its own internal policy* despite the testimony from Mr. Armstrong that Marvell's policy was simply to "have legal analyze the patent and determine what the appropriate next step would be," and from Dr. Wu that Marvell had in fact "reviewed the patent with our internal patent attorney." And CMU's counsel urged the jury to conclude, adversely to Marvell, specifically that Marvell in fact *obtained no opinion from counsel*. According to CMU's closing argument to the jury:

After Marvell learns about this patent, they begin violating a real policy that they really do have, which is when there's a possibility that you are infringing, a possibility that you are infringing on a patented invention, *you're supposed to get an opinion from legal counsel* to see if they're okay. *You never saw such an opinion in this case. You can go through all the exhibits; you won't find an opinion from anybody either inside of Marvell or outside of Marvell saying: Don't worry, you don't infringe.* Here's the policy from Alan Armstrong, who was Marvell's designee on this topic. He said send it to legal to determine what the appropriate next steps would be. *They never did this.*

(12/20/12 Rough Tr. (CMU Closing) at 32:8-20 (emphases added)). CMU later reiterated:

So what does Marvell do? They ignore this letter. They simply ignore it. They don't write back and say: We don't infringe or we made a mistake and we have your invention in our chips and let us show you our lab notebooks. They do nothing. *They also don't get an opinion of counsel. They don't do what their company policy says they should do. Again, they don't get an opinion of counsel. They just ignore it.*

MR. MADISON: Your Honor, I object based on the court's order.

THE COURT: Sustained.

MR. MADISON: Ask the Court to strike Mr. Greenswag's comments.

THE COURT: Those last comments are stricken.

(12/20/12 Rough Tr. (CMU Closing) at 34:7-20 (emphasis added)).

CMU's arguments contradicted not only the record but also the Court's ruling of earlier that day (Dkt. 753), which issued pursuant to CMU's own motion (Dkt. 722) to "Preclude Argument Relating to Communications With Counsel." In granting CMU's request to preclude

argument about advice of counsel, the Court noted that “Federal Circuit precedent provides that it is improper for the jury to be instructed that it may draw an adverse inference from Marvell’s failure to obtain an opinion of counsel or to not rely upon such an opinion at trial.” (Dkt. 753 at 2-4). Having tied Marvell’s hands through this ruling, CMU’s counsel proceeded to ignore the Court’s restrictions, repeating twice to the jury misleading accounts of Marvell’s pre-suit communications with counsel.⁷

Furthermore, whereas CMU’s counsel argued as though the jury should construe the absence of record evidence reflecting an opinion Marvell obtained from counsel as proof that no such opinion was procured, the undisputed testimony was that Marvell did consult counsel—and further elaboration about the content of that consultation had then been cut off by the Court in deference to privilege concerns. There simply was no basis whatsoever here, consistent with the trial record and the Court’s orders governing same, for CMU to be arguing to the jury that Marvell neglected to procure any actual opinion from its counsel. Marvell sought but was denied opportunity to rebut CMU’s improper, prejudicial argument on this point. (Dkt. 755, 756 at 15, 758). New trial is warranted now.

B. CMU’s Closing Improperly Argued That Marvell Had Caused Damages Beyond Loss Of A Reasonable Royalty

CMU then defied another order of this Court by arguing improperly in closing that the jury should award it more than a billion dollars in damages to avoid “break[ing] the chain” of innovation and to enable “further research,” “further innovation”:

⁷ That Marvell objected only the second time CMU resorted to this impropriety by no means precludes new trial. Because objecting in real time risks elevating the prominence of an improper argument in a juror’s mind, immediate and constant objection is not required. *See Moody v. Ford Motor Co.*, 506 F. Supp. 2d 823, 831 (N.D. Okla. 2007) (“Given the allegations of pervasive misconduct, a strict application of the timely objection rule would have placed Ford in the untenable position of making constant objections and antagonizing the jury.”).

Okay. What exhibit number is this—okay. At the bottom of the—in the associate’s agreement it says: In the event the university decides to offer licenses—it’s only talking about the university’s right to offer licenses to third parties—said licenses shall be royalty-bearing as decided by the university and the royalty income shall be utilized at the Center to sponsor further research. That is what was supposed to happen. ***And what Marvell did was they broke the chain of innovation by not paying the royalties that they now owe. All these years CMU should have been getting royalties, as the—for the purpose as shown in this 1983 agreement, to fund further research, to lead to further innovation, to fund further research, to lead to further innovation. This is why CMU has been damaged by Marvell’s infringement.***

Don’t allow Marvell to break that chain. The actions of Marvell and the steps they took can be summed up --

MR. MADISON: Excuse me, Mr. Greenswag; side bar.

(At side bar.)

THE COURT: Okay, Mr. Madison is going to be reflecting on my prior order you can’t dig deep into all of CMU’s contributions to society and mankind.

MR. GREENSWAG: I’m not going anywhere near it; I’m going to the chain of innovation—

THE COURT: We’ve heard that twice.

(12/20/12 Rough Tr. (CMU Closing) at 40:24-41:23 (emphasis added)).

Here, CMU was violating the terms of this Court’s November 6, 2012 Order (Dkt. 608), expressly prohibiting CMU from offering “evidence and argument ***regarding any purported ‘harms’ or ‘damages’ other than the loss of the reasonable royalty*** that would have resulted from the hypothetical negotiation for a license to the patents-in-suit,” particularly with respect to, *e.g.*, CMU’s “lost opportunities” and capacity to fulfill its mission by contributing to society and industry. (Dkt. 608 at 1, 4-5 (citing Dkt. 523-1, 524) (emphasis added)). The Court’s exclusion was grounded in Fed. R. Evid. 403 and concerns that such argument would complicate the issues and confuse the jury. By arguing to a Pittsburgh jury that Marvell had stymied the funding of

“research” and “innovation” at a major Pittsburgh university, CMU was clearly prejudicing the jury against Marvell.⁸

C. CMU’s Closing Improperly Equated Marvell’s Conduct With “Identity Theft”

CMU’s counsel made the impropriety of the closing still worse by urging jurors to put themselves in its shoes⁹ and equating Marvell with a *criminal who stole their identities*:

MR. GREENSWAG:

So, I think I’ve got an analogy to help you as you deliberate. *The invention in this case is like your electronic identity, your credit card numbers, your Social Security number.* It’s that which are very personal and valuable *to you.* You devote years to building up *your reputation, your credit rating, your standing.* *One day Marvell sneaks in --*

⁸ Bids by counsel to inflame a local jury against an outside entity constitute prototypical grounds for mistrial because there may be no other fit cure. *See, e.g., Whitehead v. Food Max of Miss., Inc.*, 163 F.3d 265, 277 (5th Cir. 1998) (reversing and remanding for new trial on damages where “[c]ounsel’s continued improper references to Kmart using a local representative/witness served to do nothing but appeal to prejudice and passion. It goes without saying that such conduct and comments have no place in a federal court. Worse still, they prevent a fair trial.”); *Westbrook v. Gen. Tire and Rubber Co.*, 754 F.2d 1233, 1238-40 (5th Cir. 1985) (reversing and remanding for new trial on damages where award “borders on the excessive, if it does not surpass it:” “[t]his us-against-them plea can have no appeal other than to prejudice by pitting ‘the community’ against a nonresident corporation. Such argument is an improper distraction from the jury’s sworn duty to reach a fair, honest and just verdict according to the facts and evidence presented at trial.”); *Pappas v. Middle Earth Condo. Ass’n*, 963 F.2d 534, 539-41 (2d Cir. 1992) (reversing and remanding for new trial where plaintiff appealed “to the regional bias of a jury” and verdict might “in any degree . . . have been reached as a result of appeals to regional bias or other prejudice”); *Hall v. Freese*, 735 F.2d 956, 960-61 (5th Cir. 1984) (reversing and remanding for new trial where, *e.g.*, defense counsel remarked that plaintiff came from New Orleans to Oxford, MS for trial, and remark, “perhaps not improper standing alone, serves as one more demonstration of the nature of the tactics which [defendant’s] attorneys employed in this case”); *City of Cleveland v. Peter Kiewit Sons’ Co.*, 624 F.2d 749, 755-58 (6th Cir. 1980) (reversing and remanding for new trial where counsel “play[e]d on the prejudices of the jurors as taxpayers of Cleveland, against the interests of a large out-of-state corporation,” “the court made every effort short of mistrial and contempt to negate the effect of the improper comments,” and “the excessive size of the verdict demonstrates the prejudicial effect of counsel’s comments”).

⁹ The Third Circuit frowns upon “golden rule” arguments that urge jurors to put themselves in a party’s shoes, but generally finds that an immediate curative instruction or a complete final instruction affords adequate redress. *See Edwards v. Philadelphia*, 860 F.2d 568, 574 (3d Cir. 1988).

MR. MADISON: Objection, Your Honor. It's improper argument again.
(12/20/12 Rough Tr. (CMU Closing) at 59:9-25 (emphasis added)).

Such a comparison of civil patent infringement to criminal activity—perpetrated against the jurors themselves—was improperly inflammatory and again violated this Court's command (Dkt. 608 at 1) that CMU not venture into “purported ‘harms’ or ‘damages’ other than the loss of the reasonable royalty.” Moreover, CMU's transgression was especially prejudicial because it was the all-but-final note on which the jurors left to begin their deliberations.

CMU's repeated impropriety in closing thus presents the rare instance in which counsel's misconduct warrants a new trial. Only thus can the Court now restore fundamental fairness and ensure that the \$1.17 billion verdict was not tainted by prejudice and passion. *See Draper*, 580 F.2d at 96 (concluding that “the closing argument here . . . was so constantly and effectively addressed to the prejudices of the jury that we must order a new trial”).

**D. CMU's Improper Conduct In Closing Was Part Of A Broader Pattern
Prejudicing Marvell At Trial**

CMU's misconduct in closing did not arise in isolation but was part of a pattern of CMU's broader misconduct at trial prejudicing Marvell. Two instances bear particular note:

1. Dr. Cohon's Testimony

CMU elicited testimony from CMU's President Dr. Cohon that played improperly to the biases of the hometown jury, trumpeting CMU as a “great Pittsburgh story,” “a wonderful reflection on what Pittsburgh is,” and “a great local success story of a university based on Pittsburgh values which has become a world leader,” while describing CMU's staff as “devoting ourselves to job creation, especially in Pittsburgh.” 11/28/12 Tr. at 187:7-9, 188:9-12, 189:1-5. Marvell objected to the latter comment under the Court's order (Dkt. 608) prohibiting CMU from referring to how CMU would use the royalties sought, but the Court permitted Dr. Cohon's

testimony. (11/28/12 Tr. at 189:17-192:13). These references were irrelevant to the issues the jury was to decide but likely to help inflame jurors' predispositions to favor their local institution over an outside corporation. *See, e.g., Whitehead*, 163 F.3d at 277; *Westbrook*, 754 F.2d at 1238; *Pappas*, 963 F.2d at 539; *Hall*, 735 F.2d at 960-61; *City of Cleveland*, 624 F.2d at 755-58.

2. CMU's Recurring References to "Billions"

CMU's recurring references to figures upwards of a "billion" likewise inappropriately tainted the jury's understanding of this case. For example, CMU elicited testimony from Ms. Lawton emphasizing Marvell's gross margins and operating profits (12/7/12 Tr. (Lawton) at 49:2-50:5; 54:4-55:15; 57:19-58:19; 12/10/12 Tr. (Lawton) at 73:21-74:21, 82:3-84:18) in order to set up a demonstrative reflecting gross margins and operating profits "go[ing] from 200 million up to 1.2 *billion*" annually (*id.* at 82:3-23), even though these gross figures were not tied to CMU's patented method. *See LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 81 (Fed. Cir. 2012). CMU thus used Ms. Lawton's testimony and demonstrative was to "artificially inflate the jury's damages calculation." *Id.* at 68 (where entire-market rule does not apply, disclosure of "overall product revenues cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented components to this revenue") (*citing Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011)). CMU employed the same tactic when it elicited testimony from Ms. Lawton that Marvell sold 2.3 *billion* chips, as written upon a whiteboard before the jury. (12/7/12 Tr. at 61:11-65:7).

CMU similarly elicited prejudicial references to billions in cross-examining Marvell's expert witness, Mr. Creighton Hoffman, by referencing a previous settlement, exceeding \$1 billion, in another case. (12/12/12 Tr. at 125:5-127:13; 291:19-295:18 (Q. There was a settle of \$1.725 *billion dollars*; right? . . . Q. And that was in addition to another 1.2 *billion dollars* in

settlement on behalf of Cordis; correct?")). When the Court tried to cure the resulting prejudice to Marvell with a limiting instruction, the upshot was to reiterate that "damages were in the billions" and "there had been a settlement of a couple billion" (12/13/2012 Tr. at 101:2-5) in the unrelated case. It did not prevent CMU from "skew[ing] the damages horizon for the jury." *Uniloc*, 632 F.3d at 1320. Taken together with CMU's systematic misconduct in closing, these additional efforts to inflame the jury deprived Marvell of fundamental fairness and warrant new trial.

CONCLUSION

For the foregoing reasons, Marvell respectfully requests that the Court grant Marvel JMOL pursuant to Rule 50(b), or, alternatively, a new trial pursuant to Rule 59 (a)(1).

Dated: February 11, 2013

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on February 11, 2013, the foregoing was filed electronically on ECF.

I also hereby certify that on February 11, 2013, this filing will also be served on counsel for CMU by electronic mail.

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