

EXHIBIT C Part 1

**CMU's Presentation on Marvell's Motion
for Judgment as a Matter of Law, New Trial
and/or Remittitur with Respect to Damages - Dkt. 807**

May 1-2, 2013



Carnegie Mellon

Overview

- **CMU's patented methods are extremely valuable to Marvell**
- **Marvell infringed on a massive scale**
- **Marvell reaped enormous profits from its infringement**
- **The law requires the damage award to fully reflect the value of Marvell's infringement**
- **Marvell attempts to shift focus away from the value of its infringement**

Overview

Substantial Evidence Supports the Damage Award

***Power Integrations* Supports the Verdict**

**Substantial Evidence Supports the
\$0.50 Royalty Rate**

**Marvell's Attacks On The Number Of Accused Chips
Used In The U.S. Are Irrelevant, Waived And Baseless**

**Marvell Is Not Entitled
To A New Trial Or Remittitur**

Issues Addressed

Substantial Evidence Supports the Damage Award

Power Integrations Supports the Verdict

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\$0.50 Royalty Rate**

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Substantial Evidence Supports the Damage Award



Marvell falls well short of meeting the strict standards of Rule 50



JMOL “should be granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability.”

Lightening Lube, Inc. v. Witco Corp., 4 F.3d 1153, 1166 (3d Cir. 1993)



JMOL “should be granted only if, viewing all the evidence which has been tendered and should have been admitted in the light most favorable to the moving party opposing the motion, ***no jury could decide in that party's favor.***”

Walter v. Holiday Inns, Inc., 985 F.2d 1232, 1238 (3d Cir. 1993)



In considering a JMOL motion, the Court “***may not weigh the evidence***, determine the credibility of witnesses, or substitute [its] version of the facts for the jury's version.”

Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337, 1342 (Fed. Cir. 2008)
(quoting *Lightning Lube, Inc. v. Witco Corp.* 4 F.3d 1153, 1166 (3d Cir. 1993))

Substantial Evidence Supports the Damage Award

CMU is entitled to a reasonable royalty based on the value of Marvell's infringing use of CMU's invention



35 U.S.C. §284 provides, in relevant part:

“[T]he court shall award the claimant damages adequate to compensate for the infringement but in *no event less than a reasonable royalty for the use made of the invention by the infringer.*”



“When considering the amount of a use-based reasonable royalty ‘adequate to compensate for the infringement,’ a jury may consider... the value of the benefit conferred to the infringer by *use* of the patented technology.”

Powell v. Home Depot U.S.A., Inc., 663 F.3d 1221, 1240 (Fed. Cir. 2011)

Substantial Evidence Supports the Damage Award



Marvell's sales are a proper measure of the value of its infringing use



“[A]n adequate damages award depends on the unique economic circumstances of each case,” and the “trial court has discretion to ... choose a methodology to calculate damages.”

Minco, Inc. v. Combustion Eng'g, Inc., 95 F.3d 1109, 1118 (Fed. Cir. 1996)



When infringement includes “***use of the claimed process, whatever may have been the product resulting from that use,***” and where there was evidence that the infringer would have to “***get out of the market***” if it could not use the patented technology, a reasonable royalty “may, for example, be measured as a percentage of [the infringer’s] gross or net profit dollars, **OR** as a set amount per infringing plate sold, **OR** as a percentage of the gross or net price received for each infringing [product].”

Fromson v. Western Litho Plate and Supply Co., 853 F.2d 1568, 1577-1578 (Fed. Cir. 1988); see also *Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359, 1366 (Fed. Cir. 2008)

Substantial Evidence Supports the Damage Award



Marvell's sales are a proper measure of the value of its infringing use



“[O]ne of the simplest ways to determine the value of an infringer’s use of a patented method during research is to ascertain how many sales were made based upon that infringing use.”

Dkt. 672 at 5 (citing *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009))



The hypothetical negotiation allows for consideration of the “extent to which the infringer has made use of the invention” and consideration of “any evidence probative of that use.”

Georgia Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1115, 1120 (S.D.N.Y. 1970)

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Unlike Marvell, the Court correctly described CMU's damages theory

CMU intends to prove that the alleged infringing method is used during Marvell's sales cycle, which is performed here in the United States, where both its engineers and customers are located. (Docket No. 665). CMU seeks damages for this sales cycle infringement by claiming a reasonable royalty rate on all of the chips that are produced during this sales cycle and purchased based on the result of said cycle.¹²

¹² To be clear, CMU does not seek damages from alleged infringement of the Accused Chips that are never used in the United States, because the Court has held the extra-territorial sales are not infringing (Docket No. 441), it seek damages on the infringement from the U.S. based sales cycle, and has chosen to quantify these damages by applying a per chip royalty rate on all Accused Chips produced under the sales cycle. (*Id.*). Marvell will have a full opportunity at trial to argue that this quantification is unreasonable.

Substantial Evidence Supports the Damage Award

CMU proved its damages case

The Court instructed the jury to focus on Marvell's U.S. conduct

Marvell cannot be found to have directly or indirectly infringed in connection with chips that are never used in the United States. To the extent, however, that Marvell achieved sales resulting from Marvell's alleged infringing use during the sales cycle, you may consider them in determining the value of the infringing use.

Jury Instructions
12/21/12 Tr. at 63:1-6

In this case CMU seeks a reasonable royalty. A reasonable royalty is defined as the monetary amount CMU and Marvell would have agreed upon as a fee for use of the invention in the United States at the time prior to when the infringement began.

Jury Instructions
12/21/12 Tr. at 81:7-11

Substantial Evidence Supports the Damage Award

CMU proved its damages case

The Court instructed the jury to focus on Marvell's U.S. conduct



The Court “must assume that the jury properly confined its analysis and ultimate finding of liability to the instructions given ...”

z4 Techs. v. Microsoft Corp., 507 F.3d 1340, 1356 (Fed. Cir. 2007)



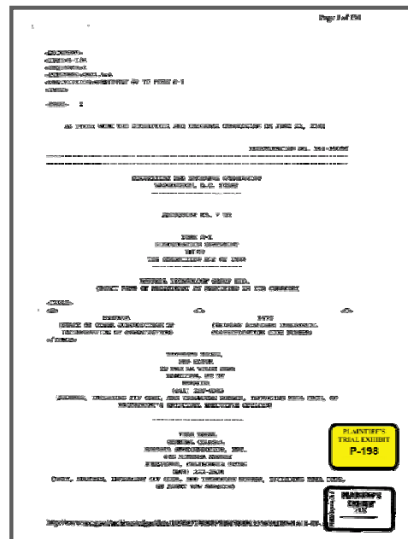
“[T]he almost invariable assumption of the law [is] that jurors follow their instructions.”

Shannon v. United States, 512 U.S. 573, 585 (1994)

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's U.S. use of CMU's patented method during the sales cycle is a prerequisite to sales



P-198

WE HAVE A LENGTHY AND EXPENSIVE SALES CYCLE, WHICH DOES NOT ASSURE PRODUCT SALES, AND WHICH IF UNSUCCESSFUL MAY HARM OUR OPERATING RESULTS.

The sales cycle for our products is long and requires us to invest significant resources with each potential customer without any assurance of sales to that customer. Our sales cycle typically begins with a three to six month evaluation and test period, also known as qualification, during which our products undergo rigorous reliability testing by our customers. Qualification is followed by a twelve to eighteen month development period by our customers and an additional three to six month period before a customer commences volume production of equipment incorporating our products. This lengthy sales cycle creates the risk that our customer will decide to cancel or change product plans for products incorporating our integrated circuits. During our sales cycle, our engineers assist our customers in implementing our solutions into their product. We incur significant research and development and selling, general and administrative expenses as part of this process and we may never generate related revenues. We derive revenue from this process only if our design is selected. Once a customer selects a particular integrated circuit for use in a data storage product, the customer generally uses solely that integrated circuit for a full generation of its product. Therefore, if we do not achieve a design win for a product we will be unable to sell our integrated circuit to our customer until our customer develops a new product or a new generation of its product. Even if we achieve a design win with a customer, our customer may not ultimately ship products incorporating our products or may cancel orders after we have achieved a sale. In addition, we will have to begin the qualification process again when a customer develops a new generation of a product for which we were the successful supplier.

Successful participation in the sales cycle is necessary.

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's U.S. use of CMU's patented method during the sales cycle is a prerequisite to sales



Dr. Bajorek, did you come to any opinions about Marvell's and its customers use of the MNP and NLD technology?

A. I have.

Q. And what was that opinion?

A. That both Marvell and its customers had to use those, the MNP and NLD technologies during the sales cycle.

Dr. Bajorek, 12/4/12 Tr. at 72:11-16

Marvell had to use CMU's patented method during the sales cycle.

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's U.S. use of CMU's patented method during the sales cycle is a prerequisite to sales



Q. Now, Dr. Bajorek, have you, in connection with your work, ever heard anybody in the hard disk drive industry describe the sales cycle as, winner take all?

A. I have. I can think of a quotation from Peter Hillman, executive at Sirius Logix. Sirius Logix was a chip maker for the industry that no longer exists. It failed along the way. But he definitely characterized it as a, winner takes all business. If you succeed through the sales cycle, you get all the chips for that particular drive program. If you fail, you get nothing. You can't sell a single chip.

Dr. Bajorek, 12/4/12
Tr. at 67:5-14

Marvell's sales cycle is "winner take all."

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's U.S. use of CMU's patented method during the sales cycle is a prerequisite to sales



Q. What do you mean? Why is it highly unique?

A. Because it's -- it's a -- it's really a full-custom device. Everything about the device is custom, and there is no kind of -- there is no standard way of -- there's no standard specification.

It's not like you could say "WiFi," you know, and 30 companies design a chip, however they design it to a WiFi specification that works as a WiFi is supposed to work.

This is a highly custom chip in the sense that it doesn't have any kind of industry-defined standard around what it looks like. And so, not to my knowledge, has a drive company ever taken two read channel suppliers to production on the same drive or the same generation at the same time.

(152:8-22)

P-Demo 8 at 6;
Dr. Bajorek, 12/4/12
Tr. at 69:15-70:10

Marvell's sales cycle is "winner take all."

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's *sales cycle* occurred **in the United States**;
Marvell *stipulated* that:

- The Accused Products were “researched, designed and developed” **in the U.S.**
- Marvell’s management, strategic decisions and most business activities occur **in the U.S.**
- Marvell’s system and design teams are located **in the U.S.**
- Marvell’s management operations group, which supports R&D, is **in the U.S.**

Stipulation, 12/21/12 Tr. at 50-53

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's ***sales*** occurred **in the United States**;
Marvell ***stipulated*** that:

- Marvell's headquarters and principal place of business **is in the U.S.**
- Almost all ***sales*** and marketing management personnel for read channel products are **in the U.S.**
- ***Sales*** decision-making for read channel products is conducted **in the U.S.**
- Messrs. Armstrong and Brennan, located **in the U.S.**, are knowledgeable about ***sales***, their ***sales*** and marketing management functions are essential to ongoing ***sales***
- Almost all design, development, ***sales*** and marketing, and operation documents are **in the U.S.**

Stipulation, 12/21/12 Tr. at 50-53

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell's *sales* occurred in the United States



19 Q. We talked a little bit about design wins,
20 and this paragraph at the end talks a little bit
21 about design wins, as well. Is there somebody at
22 Marvell who is ultimately responsible for closing
23 the deal when you get a design win?

24 A. Yeah. That would be sales.

25 Q. That's Mr. Brennan?

1 A. Yes, or somebody that works for him.

2 Q. But he ultimately has to sign off on
3 that?

4 A. Correct.

Dr. Armstrong,
JX-C at 212-213

Marvell “closes the deal” in the United States.

Substantial Evidence Supports the Damage Award

CMU proved its damages case



Q. And sir, did you come to an opinion about where Marvell's sales take place?

A. I have.

Q. What is that opinion?

A. They essentially take place in the United States.

Dr. Bajorek,
12/4/12 Tr. at 72

A Yes, I have. They're part of that infamous two-and-a-half foot stack of paper.

Q Okay. And what did you determine as a result of that review, sir?

A The review confirmed that essentially all the key activities necessary to successfully complete a sales cycle occur in the United States, both --

Dr. Bajorek,
12/4/12 Tr. at 107

Dr. Bajorek confirmed that Marvell's sales cycle and sales occurred in the United States.

Substantial Evidence Supports the Damage Award

CMU proved its damages case

The third way is another type of indirect infringement called contributory infringement. Contributory infringement happens if Marvell sold or offered for sale in the United States a material component of the patented invention that was not a staple article of commerce and which Marvell knew was especially made for use in practicing the claimed methods of either Claim 4 of the '839 patent or Claim 2 of the '180 patent. To prove contributory negligence -- excuse me, contributory infringement, CMU must prove there is direct infringement.

Jury Instructions, 12/21/12 Tr. at 62:16-25

Marvell is liable for contributory infringement of a claim if CMU proves by a preponderance of the evidence that: One, Marvell sold or offered to sell the MNP type and NLD type chips within the United States; two, the detectors of the MNP type and NLD type chips have no substantial non-infringing use; three, the detectors of the MNP type and NLD type chips constitute a material part of the invention; four, Marvell is aware of the '839 patent and/or '180 patent and knows that detectors of the accused chips were especially made or adopted for use in practicing the patent; and, five, that use directly infringes the claim.

Jury Instructions, 12/21/12 Tr. at 75:8-18

The jury found that Marvell's sales take place in the United States.

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell would not have made any sales if it had not used CMU's patented method in the United States



Q. Dr. Bajorek, did you come to any opinion about whether or not the MNP and NLD technology was "must have" for Marvell?

A. Yes, I have.

Q. What was that opinion?

A. That it, indeed, it was "must have" for TEM — for Marvell's survival at the time when Marvell adopted those technology, the MNP technology into its product stream.

Q. What do you mean by the phrase, must have?

A. It's, it's a life or death matter for the company.

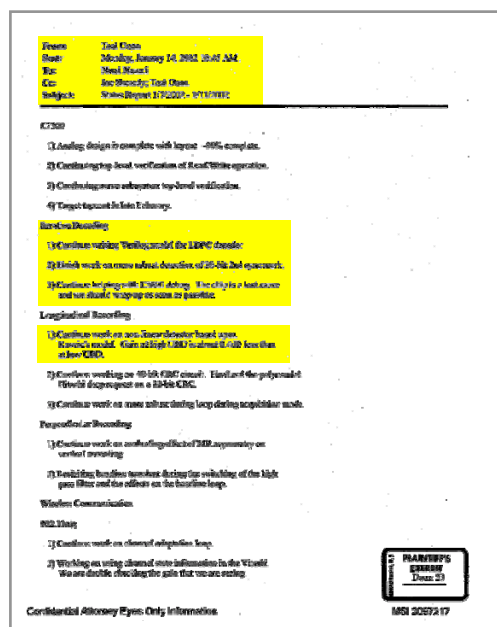
Dr. Bajorek, 12/4/12
Tr. at 73:16-24

Use of CMU's patented method was a matter of "life or death."

Substantial Evidence Supports the Damage Award

CMU proved its damages case

Marvell would not have made any sales if it had not used CMU's patented method in the United States



From: Toai Doan
Sent: Monday, January 14, 2002 10:45 AM
To: Nersi Nazari
Cc: Joe Sheredy; Toai Doan
Subject: Status Report 1/7/2002 - 1/11/2002

Iterative Decoding

- 1) Continue writing Verilog model for LDPC decoder
- 2) Finish work on more robust detection of 30-bit 2nd sync mark.
- 3) Continue helping with CS600 debug. The chip is a lost cause and we should wrap up as soon as possible.

- 1) Continue work on non-linear detector based upon Kavcic's model. Gain at high UBD is about 0.4dB less than at low UBD.

Marvell had no alternatives to CMU's patented method.

Marvell would not have made any sales if it had not used CMU's patented method in the United States

From: Michael O'Dell
Sent: Monday, June 17, 2002 6:04 PM
To: Bill Brennan
Subject: E-Staff Summary
Attach: E-staff weekly 6 17 02.doc

First of all I called Frank Zeng at IBM to get a read on the Infineon chip - you will see the bullet under Hitachi/IBM. Basically what I found out is that Infineon is basically at the same point we are with 7500 - 1.5Gbps, basically functioning silicon, have not sampled anyone yet. (we may be a week or so ahead on sampling) However, this device does have the IBM dual parity (same as Redwing) AND has an MNP!! I put in staff that we must have MNP in 7500 ASAP to be competitive - no one disagreed.

CMU's patented method was “must have.”