

**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

**DECLARATION OF MIKA MURAKAMI**

I, Mika Murakami, declare as follows:

1. I am the Treasurer of Marvell Semiconductor, Inc. I submit this declaration in support of Marvell Technology Group, Ltd. and Marvell Semiconductor, Inc.'s Opposition to CMU's Motion and Verified Petition for Supplemental Relief in Aid of Execution Pursuant to Pennsylvania Rule of Civil Procedure 3118. I have personal knowledge of the facts set forth in this affidavit and, if called as a witness, could and would competently testify to them.

2. I understand that CMU has filed a motion to enjoin Marvell from, among other things, paying dividends, repurchasing stock, and from approving a leveraged buyout. I submit this declaration to provide facts in response to and in clarification of certain points raised by CMU in support of its motion.

3. I understand that CMU has suggested that Marvell's dividends and share repurchases are not part of the ordinary course of business at Marvell and are depleting the cash available to satisfy the judgment. In fact, however, Marvell's share repurchases are part of the ordinary course of our business, the program has been in place for over three years, and similar programs have been used in the ordinary course of business of many other leading companies (*e.g.*, Apple, Microsoft, General Electric), including numerous semiconductor

companies (e.g., Intel, Qualcomm, Texas Instruments, Altera, SanDisk, Infineon, Analog Device, Xilinx, Avago, Nvidia, Maxim, Linear Tech., Microchip, and ST Microelectronics). Dividends are also common among leading companies (e.g., Apple, Microsoft) and semiconductor companies (e.g., Intel, Qualcomm, Texas Instruments, Altera, Infineon, Analog Device, Xilinx, Avago, Maxim, Linear Tech., Microchip, and ST Microelectronics). In fact, Marvell took this into account when it announced in July 2012 that it would initiate a quarterly dividend in the ordinary course of our business.

4. Over the course of more than three (3) years, Marvell has authorized share repurchases in several tranches, up to a cumulative capacity of \$3 billion, and pursuant to this program has already executed share repurchases nearing that capacity, cumulatively \$2.74 billion. Marvell has less than \$259 million remaining authorized under the existing program and has no current plans to increase the authorized amount of share repurchases at this time.

5. I also understand that CMU suggests that Bermuda law may require Marvell to stop paying dividends, pointing to the following statement in a Marvell press release that announced the date of an upcoming dividend: “Developments in on-going litigation could affect Marvell’s ability to pay the dividend on December 23, 2013 under Bermuda law, where Marvell is incorporated.” The purpose of this statement was simply to alert investors to the fact that the dividend (which Marvell is obligated to pay, once declared by the Board) could be delayed if this Court’s ruling on enhancement impacted Marvell’s ability to pass a statutorily required liquidity test prior to payment of the dividend.

6. I further understand that CMU has stated that Marvell has not set aside any reserve to pay the judgment. As of November 2, 2013, the date of the end of Marvell’s third financial quarter, Marvell had more than \$1.8 billion in cash, cash equivalents, restricted cash and short term investments. Although Marvell’s cash position fluctuates during any given

quarter, Marvell currently expects to generate approximately \$125 million in free cash flow during the current quarter. Marvell is not dissipating its assets to avoid paying the judgment. I understand that this Court has not yet ruled on Marvell's laches motion, which could reduce the judgment by more than \$500 million, and that Marvell intends to file an appeal that could substantially reduce, if not eliminate the entire judgment. It is my understanding, that under these circumstances, it is not appropriate under the Generally Accepted Accounting Principles, to book a reserve for the judgment. A more detailed summary of Marvell's position is set forth in our correspondence with the SEC attached hereto as Exhibit "A".

7. I also understand that CMU stated that Marvell may be considering a leveraged buyout by Kohlberg, Kravis & Roberts & Co (KKR LP), based on a rumor it read in a Bloomberg article. As indicated in a filing by KKR LP on Form 13-F for the period ended September 30, 2013 as filed on November 14, 2013, KKR LP holds 22 million shares of Marvell (which is less than 5% of Marvell's outstanding shares). This filing showed that Marvell is one of thirty two independent investments held by KKR LP.

8. I understand that CMU stated that Marvell's acting Interim Chief Financial Officer, Brad Feller, resigned to pursue other opportunities. This is true. Marvell has also announced the appointment of Michael Rashkin as Interim Chief Financial Officer. Mr. Rashkin has been with Marvell since 1999 and prior to this appointment served in a variety of roles in the finance organization including in VP of Tax, VP of Strategic Development and President of the Marvell Charitable Fund. Mr. Rashkin also served as Interim Chief Financial Officer of Marvell from July 2007 to January 2008.

9. Finally, I understand that CMU has stated that an organization called "Shareholders Foundation" announced that a law firm had begun an investigation on behalf of Marvell's shareholders into potential breaches of fiduciary duties by certain officers and

directors at Marvell. My understanding is that this organization is connected with various plaintiffs class action firms, and regularly issues press releases in an attempt to identify enough interested parties to justify a lawsuit. To my knowledge, there has been no lawsuit filed and no associated governmental regulatory or administrative inquiries into Marvell's practices.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed this 16th day of December, 2013, in Santa Clara, California.

A handwritten signature in black ink, appearing to read "Mika Murakami", with a long horizontal flourish extending to the right.

Mika Murakami

# **EXHIBIT A**

CORRESP 1 filename1.htm

[COMPANY LETTERHEAD]

May 24, 2013

**VIA EDGAR AND OVERNIGHT DELIVERY**

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street N.E.  
Washington, D.C. 20549

Attention: Kevin L. Vaughan, Accounting Branch Chief  
Tara Harkins, Staff Accountant  
Jay Webb

**Re: Marvell Technology Group Ltd.  
Form 10-K for the Year Ended February 2, 2013  
Filed March 29, 2013  
File No. 000-30877**

Ladies and Gentlemen:

On behalf of Marvell Technology Group Ltd. (also referred to herein as the “company,” “Marvell,” “we,” “us” and “our”), we submit this letter in response to comments from the staff (the “Staff”) of the Securities and Exchange Commission (the “Commission”) received by letter dated April 30, 2013 relating to our Annual Report on Form 10-K for the year ended February 2, 2013 filed with the Commission on March 29, 2013 (the “**2013 Form 10-K**”).

In this letter, we have recited the comment from the Staff in italicized, bold type and have followed the comment with our response.

Form 10-K for the Fiscal Year ended February 2, 2013

Item 8. Financial Statements and Supplementary Data, page 57

Note 10 – Commitments and Contingencies, page 86

-Contingencies, page 87

- 1. We note your disclosures regarding legal matters outstanding with the Carnegie Mellon Litigation and the significance of the related December 26, 2012 patent judgment against the company. We further note it appears you did not accrue any liabilities for this matter as of February 2, 2013. Please explain to us the significant factors you considered in determining that no accrual for this matter was necessary under the circumstances.***

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*Within your discussion, please provide to us an estimate of the possible loss or range of loss related to this matter since this is an unrecognized contingencies whereby an accrual has not been made. In this regard, we refer to the disclosures in this note and elsewhere in the filing of the damage amounts awarded against you in the case so it is not clear to us why you unable to provide any range of loss disclosures for the Carnegie contingency in this note. Refer to the guidance at FASB ASC 450-20-50.*

**Response:** We respectfully acknowledge the Staff's comment regarding the accounting and disclosure for the contingency with Carnegie Mellon University ("CMU").

#### **Accounting for the CMU Litigation Contingency**

In making the determination that an accrual was not appropriate as of February 2, 2013, the company considered the guidance in FASB ASC 450-20-25, and performed a comprehensive analysis, ultimately concluding that, despite the jury verdict in the District Court in Pittsburgh, it was only reasonably possible, but not probable, that a loss had been incurred.

As will be discussed below, we believe we have strong technical grounds for our appeal based on the law and legal precedent. Although the plaintiff may be a highly esteemed university and a very sympathetic plaintiff to a local jury, the appeal will proceed in Washington D.C. in the United States Court of Appeals for the Federal Circuit and be heard by a panel of judges who specialize in patent infringement matters. In similar cases where the verdict is contrary to the law or not supported by the substantial evidence, the jury's assessment is, more often than not, either overturned completely, or the damages assessment is reduced significantly during either the post-trial motions, or after the appeals process.

We believe that we will be successful on appeal in this case and that there will be no finding of infringement. If we are unsuccessful in overturning the finding of infringement, we believe it is even more unlikely that a final assessment, after all appeals, will be in a magnitude of the amount assessed by the District Court in Pittsburgh. We would like to note to the Staff that our discussion below relating to the assessment of damages is for added context and understanding of our positions and risks related to this case, and is not meant to imply that there is an amount above zero which would be considered probable, due to our expectations related to non-infringement.

Finally, we advise the Staff that although required mediations have occurred in this case, that our positions and those of CMU are so far apart that we do not believe any settlement amount is probable or estimable at this time.

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### Summary of Key Points

#### *Non-Infringement, Invalidity, and Marvell's Internal Development*

At subject in this legal matter is how media noise is addressed within Marvell's chips. Marvell's chips address media noise in a fundamentally different way than the claims in the two CMU patents at issue, U.S. Patent Nos. 6,201,839 and 6,438,180. While CMU's asserted patents claim a theoretical technique, this technique is so complex that it cannot be implemented in real-world silicon chips. Marvell developed its own unique approach, which could be implemented in actual chips. Marvell's chips do not perform each of the steps that are required by CMU's asserted patent claims.

Marvell has sought and been awarded more than 100 patents on its read channel technologies, including U.S. Patent Nos. 6,931,585 and 7,155,660, which are directed to its media noise approach. For example, the '585 patent was jointly developed in-house at Marvell by co-inventors Dr. Zining Wu and Mr. Gregory Burd. Their work was based on an earlier Marvell architecture developed in 1998 and patented by Marvell's Dr. Andrei Vityaev. When the applications to the '585 and '660 patents were submitted by Marvell to the U.S. Patent Office, Marvell disclosed the asserted patents held by CMU. In addition, Marvell was awarded U.S. Patent No. 8,160,181, which is directed to another media noise approach. The '181 patent was invented by Marvell employees Dr. Wu, Hongxin Song, Seo-How Low, and Panu Chaichanavong.

In addition to Marvell's confidence that there is no infringement of CMU's asserted patents, Marvell believes the CMU asserted patents are invalid, as they are anticipated by the prior work done by Seagate Technology plc ("**Seagate**"), including the work reflected in U.S. Patent No. 6,282,251. This prior art patent was invented by Mr. Glen Worstell, a Seagate engineer. The Seagate patent was filed on March 21, 1995, approximately 14 months before the CMU inventors, Drs. Kavcic and Moura, even conceived of their alleged invention. Mr. Worstell also informed CMU that he himself had done work in the area covered by the asserted CMU patents, but CMU never informed the U.S. Patent Office about this communication from Seagate or about the work at Seagate. As a result, the U.S. Patent Office did not consider the work of Seagate in its examination of the CMU patent applications.

#### *Magnitude of Damages*

Even if Marvell is unsuccessful in overturning the finding of infringement and validity, Marvell advises the Staff that it intends to challenge, and believes legal precedent and the facts of the case support its position on, several factors that significantly impacted the jury award. While Marvell has several motions and arguments that it is pursuing through post-trial motions before the District Court, and Marvell intends to pursue on appeal if its post-trial motions are not

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successful, Marvell would like to focus the Staff's attention on the two most prevalent and impactful aspects of the damages assessment.

Firstly, CMU was awarded damages on all sales of Marvell's chips worldwide, despite the CMU patents only having been issued in the United States. A vast majority of the chips Marvell sells are manufactured abroad and never enter the United States. Based on legal precedent, Marvell argued that the law does not allow for damages based on products which are exclusively made and used overseas, and which never enter the U.S. The District Court ruled that as the chips were largely developed in the U.S. and since Marvell has a highly collaborative sales cycle, damages could be assessed based on all sales of Marvell's chips worldwide. Marvell's view is that this conclusion went against legal precedent, and Marvell believes that this aspect of the judgment will be reversed in either post-trial motions or upon appeal. Marvell would also like to highlight to the Staff a March 26, 2013 decision in *Power Integrations, Inc. v. Fairchild Semiconductor Corp.*, 711 F.3d 1348, by the Federal Circuit Court of Appeals, the same appellate court that would preside over Marvell's appeal. In *Power Integrations*, the jury had originally awarded damages based on worldwide sales. The Federal Circuit held that the original award of worldwide damages was contrary to the law, rejecting the theory that a damages award may be based on worldwide sales. Marvell believes the Federal Circuit will continue to uphold this view and reject any damages related to extraterritorial sales, as the Federal Circuit has done in all cases to date.

Secondly, the assessment by the jury equates to a royalty rate of \$0.50 per chip. Marvell believes this rate is plainly excessive in light of the industry standard royalty rates. This amount is far in excess of typical rates for much more significant technologies. In addition, the verdict assumes that all of the success of Marvell's products was due to the allegedly infringing media noise feature, and fails to account for the fact that more than 80 additional features were included in Marvell's chips at the same time the media-noise feature was added. This failure to properly apportion damages between the allegedly infringing feature and other non infringing features runs afoul of the law. Marvell also would like to highlight to the Staff that in other recent high-profile cases, the rulings by the Federal Circuit court supports Marvell's position on this matter. For example – see *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011) and *LaserDynamics, Inc. v. Quanta Comp., Inc.*, 694 F.3d 51, 66-69, 80-81 (Fed. Cir. 2012). Indeed, CMU's damages expert ignored the most relevant evidence regarding the form and amount of a reasonable royalty payment in this case, specifically the real world licenses, offers, and projections involving the patents-in-suit. For example, CMU previously offered licenses to the patents in suit for as little as a one-time flat fee of \$200,000. When properly considered, Marvell believes this evidence proves that even if any royalties are due to CMU, these royalties should be for a very nominal amount.

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### **Disclosure of the CMU Litigation Contingency**

We agree with the Staff and acknowledge the disclosure required in ASC 450-20-50 of “*an estimate of the possible loss or range of loss.*” We advise the Staff that we believe we satisfied this disclosure requirement by disclosing the possible loss in the CMU matter, which is the amount of the jury verdict of \$1.17 billion, plus any enhancements for willfulness, attorney’s fees, and other costs. As it would be improper for us to attempt to guess the amounts that will be claimed and/or the future direction of the court, we decided the best disclosure was to specifically disclose and quantify all amounts known at the time of the filing, and qualitatively disclose exposures which had not yet been quantified. This disclosure was provided on page 88 of our Annual Report on Form 10-K as follows:

“On December 26, 2012, a jury delivered a verdict that found the CMU patents in suit were literally and willfully infringed and valid, and awarded past damages in the amount of \$1.17 billion. Due to the finding of willfulness, the judge could enhance by some amount up to treble the damages during post trial proceedings. In addition, CMU has disclosed in its post trial motions that it is seeking pre-judgment interest of \$322 million, post-judgment interest, attorneys’ fees, and an injunction or ongoing royalties.”

In addition, we also have disclosed the low end of the reasonably possible range, which is zero. We believe that this disclosure is made clear by the fact that we prominently disclose the fact that we have not recorded any accrual for this matter and the intent to vigorously challenge the judgment through all appropriate post-trial motions and appeal processes.

However, in acknowledgement of the Staff’s comment, we plan to enhance our disclosure related to the CMU litigation in future filings by affirmatively disclosing that we believe the low end of the possible range of loss is zero but can not reasonably estimate the upper range of possible loss, as a number of factors (including finalization of post-trial motions at the District Court) could significantly change the assessment of damages.

### **Additional Disclosure**

As supplement to our responses above, we would also like to advise the Staff that on January 7, 2013, less than two weeks after the CMU verdict, we posted a Frequently Asked Questions (FAQ) document on our website. This FAQ provides a very detailed discussion and summary of our positions and opinions on the CMU litigation. We respectfully submit this summary to the Staff as Exhibit A attached hereto.

In connection with responding to your comments, we acknowledge that:

- we are responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and

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- we may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please direct your questions or comments to me at 408-222-9826 or Tom Savage at 408-222-9753. In addition, we would request that you provide a facsimile of any additional comments you may have to me at 408-222-1917 or Tom Savage at 408-222-9177.

Thank you for your assistance.

Very truly yours,

/s/ Brad D. Feller

Brad D. Feller  
Interim Chief Financial Officer  
Marvell Technology Group Ltd.

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**Exhibit A**

(located at <http://www.marvell.com/company/legal/>)

**Marvell Technology Group Ltd.  
Frequently Asked Questions Concerning the CMU Litigation  
(Revised on January 28, 2013)**

**Introduction**

As disclosed by Marvell Technology Group Ltd. (“Marvell”) in a press release dated December 27, 2012, on December 26, 2012, a jury in Pittsburgh delivered a verdict in a lawsuit brought by Carnegie Mellon University (“CMU”) against Marvell in the United States District Court for the Western District of Pennsylvania. The jury found that the two CMU patents at issue were literally and willfully infringed and valid, and awarded damages in the amount of \$1.17 billion. As stated in Marvell’s December 27 press release, Marvell believes that the evidence and the law do not support the jury’s findings and the award of damages and will seek to overturn the verdict in post-trial motions before the District Court and, if necessary, to appeal to the U.S. Court of Appeals for the Federal Circuit in Washington, D.C.

Marvell is providing the following FAQs as of January 7, 2013 to provide additional information to Marvell stakeholders and partners regarding the CMU litigation and to elaborate on Marvell’s positions described in the December 27 press release. Marvell has compiled the following from publicly available sources including the proceedings of the litigation. Marvell believes that additional details regarding Marvell’s position regarding the jury verdict and the litigation may further clarify the status of the CMU litigation.

**Non-infringement**

1. What is Marvell’s non-infringement position?

Marvell’s chips address media noise in a fundamentally different way than the claims in the two CMU patents at issue, U.S. Patent Nos. 6,201,839 and 6,438,180. Marvell’s Media Noise Processor (“MNP”) and Non-Linear Viterbi Detector (“NLD”) features use a simple Viterbi detector, along with either pre- or post-processing. While CMU’s patents claim a theoretical technique, this technique is so complex that it cannot be implemented in real-world silicon chips. Marvell developed its own unique approach, which could be implemented in actual chips. More specifically, Marvell’s chips do not, as required by CMU’s patent claims, determine branch metric values in a trellis by selecting a branch metric function from a set of functions and by applying the functions to a plurality of signal samples.

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Marvell's simulation computer programs for its MNP and NLD features do not infringe for the same reasons. Moreover, a separate computer program designed by Marvell to simulate the theoretical performance of CMU's algorithm was used for evaluation purposes and as a benchmark tool and was not incorporated into any Marvell chips. None of these simulation computer programs infringe as they are not detectors that process signal samples, as required by CMU's patent claims, but rather are merely computer software programs that process data from text files. [January 7, 2013]

2. Does Marvell have its own patents that cover its MNP feature and its NLD feature?

Marvell has sought and been awarded more than 100 patents on its read channel technologies, including U.S. Patent Nos. 6,931,585 and 7,155,660, which are directed to its media noise post-processor. For example, the '585 patent covering Marvell's MNP post-processor was jointly developed in-house at Marvell by co-inventors Dr. Zining Wu and Mr. Gregory Burd. Their work was based on an earlier Marvell post-processor architecture developed in 1998 and patented by Marvell's Dr. Andrei Vityaev. In addition, Marvell was awarded a patent on its NLD feature, U.S. Patent No. 8,160,181. The '181 patent was invented by Dr. Wu, Hongxin Song, Seo-How Low, and Panu Chaichanavong. [January 7, 2013]

**Invalidity**

3. Why are the CMU patents invalid, in Marvell's view?

CMU's patents are anticipated by the prior work done by Seagate, including the work reflected in U.S. Patent No. 6,282,251. This prior art patent was invented by Mr. Glen Worstell, a Seagate engineer. The CMU patents stated that the difference between the prior art and the CMU patents was that the prior art methods took into account signal dependent noise in the Viterbi detector, but failed to take into consideration correlated noise. See Col. 1:57-67 of U.S. Patent No. 6,201,839. This was incorrect. In fact, the Seagate patent took into consideration the correlation between noise samples in the read back signal. This is plain from the very title of Seagate's patent 6,282,251: "Modified Viterbi Detector Which Accounts For Correlated Noise." See also, for example, Column 2, lines 3-7 of the Seagate patent. The Seagate patent was filed on March 21, 1995, approximately 14 months before the CMU inventors, Drs. Kavcic and Moura, even conceived of their alleged invention.

What's more, Mr. Worstell informed CMU that he himself had done work on a "Viterbi detector modification to account for noise correlation." But CMU never informed the U.S. Patent Office about this communication from Seagate or about the work at Seagate. As a result, the U.S. Patent Office did not consider the work of Seagate in its examination of the CMU patent applications. Indeed, throughout the prosecution of both patents, CMU never cited a single prior art patent reference to the U.S. Patent Office, other than cross-referencing in the '180 patent the prior art patents already cited by the U.S. Patent Office in the '839 patent. [January 7, 2013]

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4. If the Seagate patent invalidates that CMU patent claims, why did the Seagate inventor say in an email that the CMU invention goes beyond his work and is probably more interesting?

The Seagate inventor reviewed an early invention disclosure of the CMU patent. The disclosure did not include any patent claims, and only included equations using covariance matrices. The Court granted Marvell's motion for summary judgment of non-infringement of several CMU patent claims that require the use of covariance matrices as Marvell's chips do not use such matrices. Even if the use of covariance matrices went beyond the Seagate patent or was probably more interesting, it has no bearing on the claims CMU was asserting at trial, which do not require the use of covariance matrices. [January 7, 2013]

#### **Damages**

5. Why did CMU sue Marvell only and not any other silicon providers?

CMU's attorneys have not indicated why they have not sued any other companies. Marvell is the market leader in HDD silicon and therefore an attractive target. [January 7, 2013]

6. How did the jury derive the \$1.17B damage award?

CMU's attorneys sought \$1.17B in damages, based on 50 cents for every chip Marvell has sold worldwide since March 6, 2003. [January 7, 2013]

7. Why is 50 cents per chip not a reasonable royalty?

Marvell believes the 50 cents per chip and 1.17 billion dollar damages sought by CMU led the jury to an erroneous result for several reasons.

First, CMU's damages expert ignored the most relevant evidence regarding the form and amount of a reasonable royalty payment in this case – i.e., the real world licenses, offers, and projections involving the patents-in-suit. For example, CMU previously offered licenses to the patents in suit for as little as a one-time flat fee of \$200,000. CMU's damages expert effectively disregarded this and other CMU licensing documents. But when properly considered, Marvell believes this evidence proves that even if any royalties are due to CMU (under the assumption Marvell used CMU technology), these royalties should be for a very nominal amount.

Second, CMU's damages expert lacked the technical and industry expertise to reliably conduct the "price premium" analysis used to arrive at the 50 cent number. For example, there is no dispute that Marvell's MNP feature was one of many improvements in Marvell's accused chips – yet CMU's damages expert had no basis, and in fact was not qualified to determine the value attributable to that functionality, as opposed to other improvements. Further, the 50 cent per chip

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was derived from information relating to only one historical data point, which was for the sale of a small quantity of sample chips sold to one of Marvell's smallest customers. Indeed, a royalty rate of 50 cents per chip yields a royalty that as a percentage of the average sales price of a chip is far in excess (perhaps an order of magnitude greater or more) of typical industry rates for much more significant technologies.

Third, CMU's expert also assumed that all of the success of Marvell's products was due to the allegedly infringing MNP feature, and failed to account for the fact that more than 80 additional features were included in Marvell's chips at the same time the MNP feature was added. This failure to properly apportion damages between the allegedly infringing feature and other non infringing features runs afoul of the law, including the recent decision by the Federal Circuit in *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011).

Fourth, CMU improperly sought damages for alleged U.S. patent infringement based on Marvell's worldwide sales, as discussed in more detail below. [January 7, 2013]

8. Why shouldn't CMU obtain royalties attributable to products made, used, and sold outside the U.S.?

The U.S. patent laws, like the laws of other countries, are geographically limited in scope. As a result, use of a method outside the U.S. does not infringe a U.S. method patent. The vast majority of Marvell's chips are sold overseas, and most of these chips never enter the United States. Based on legal precedent, we believe the law does not allow for damages against products which are exclusively made, used, and sold overseas, and which never enter the U.S. Such "extraterritorial" conduct is simply beyond the scope of U.S. patent laws and U.S. courts, and Marvell believes it was erroneous for CMU's damages expert to assess damages against the entirety of Marvell's overseas chip sales. Nonetheless, this fundamental legal error pervaded virtually every aspect of CMU's damages expert's analysis. The sales of non infringing chips overseas accounts for nearly 80 percent (or over \$935 million) of CMU's total damages figure. [January 7, 2013]

9. Will this lawsuit be expanded to Marvell customers?

CMU's attorneys have not indicated any intention to pursue Marvell's customers, and Marvell does not expect CMU to do so. Based on the Supreme Court's decision in the *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617, 128 S.Ct. 2109, 170 L.Ed.2d 996 (2008) case, CMU cannot seek royalties from both Marvell and Marvell's customers for the use of the same chips. [January 7, 2013]

10. What Marvell products were accused?

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CMU's allegations only related to Marvell's read channel and SOC HDD chips that include the MNP or NLD features. No other Marvell chips or product lines were involved, including Marvell's other storage-related products, such as Marvell's SSD products. [January 28, 2013]

### **Willfulness**

11. Why does Marvell believe that CMU failed to meet its burden on the objective prong of the willfulness analysis?

Although the jury found willful infringement, it is the Court's ultimate decision whether Marvell acted despite an "objectively high likelihood that its actions constituted infringement of a valid patent." In this case, Marvell believes that there was no infringement and that the patents are invalid. Marvell also believes that its actions were objectively reasonable for a number of reasons.

First, CMU's inventor, Dr. Kavcic, explained in an October 2001 email to Seagate that he had not invented a Viterbi-like detector that accounted for data dependency in a "post-processor" (as do Marvell's MNP chips). Rather, Dr. Kavcic believed his claims were limited to a modified Viterbi trellis. Dr. Kavcic even described Marvell's patented MNP technology as "novel" in an article that he co-authored. Kavcic, Aleksandar, and Ara Patapoutian. "The read channel." Proceedings of the IEEE 96, no. 11 (2008): 1761-1774. As the Federal Circuit recently explained, "[i]f the accused infringer's position is susceptible to a reasonable conclusion of no infringement, the first prong of [the test for willfulness] cannot be met." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1310 (Fed. Cir. 2011) (emphasis added).

Second, Marvell demonstrated a strong invalidity case. In fact, the Court characterized Marvell's motion for summary judgment of invalidity as a "close call."

Third, Marvell freely and voluntarily disclosed the CMU patents to the U.S. Patent Office when Marvell was pursuing patents on its own technology. In deciding to grant Marvell's patents, the U.S. Patent Office implicitly agreed with Marvell that the Marvell technology was patentably distinct from the CMU patents.

Finally, the fact that CMU did nothing for six years after its solicitation letters to the industry failed to yield a single license suggests CMU's technology was not commercially feasible – not willfully infringed. Moreover, at no time prior to filing its lawsuit in March 2009 did CMU communicate that it believed Marvell was infringing on its patents. [January 7, 2013]

12. Why could no reasonable jury find Marvell had the required subjective intent for willful infringement?

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As even CMU acknowledges, Marvell is a technology innovator. Marvell developed and patented its own solutions to the signal dependent noise problem, which it then incorporated into its chips. At trial, Marvell's inventors explained that they did not copy CMU's patents and detailed how they came up with their own independent solutions. In fact, CMU failed to produce evidence that Marvell copied any part of the asserted patent claims. [January 7, 2013]

13. Does the verdict affect Marvell's current shipment of products?

There will be no impact on shipment of products unless and until the Court issues an injunction. If CMU files a post-trial motion for an injunction, under the Court's current schedule, the issue would likely not be resolved before a hearing scheduled for May 1-2, 2013. Marvell has strong grounds to oppose any request for an injunction. Specifically, since CMU does not make any actual products that compete with Marvell's products, CMU is not suffering any "irreparable harm," which is a prerequisite for an injunction. [January 7, 2013]

14. Does Marvell anticipate that an injunction may be granted?

No. Marvell has strong grounds to oppose any request for an injunction. For example, money damages are adequate to compensate CMU for any alleged harm. Further, the lack of irreparable harm to CMU in the absence of an injunction supports Marvell. In addition, the balance of hardships favors Marvell, particularly since the parties are not competitors and there is no evidence that any other company has ever used the patented technology at issue in the case. [January 7, 2013]

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### **Appeal**

15. What are the grounds for appeal?

Marvell intends to file a number of post-trial motions, including a renewed motion for a mistrial, a motion based on laches, and motions for judgment as a matter of law as to non-infringement, invalidity, non-willfulness, and as to the alleged damages. If Marvell's post-trial motions are successful, an appeal to the U.S. Court of Appeals for the Federal Circuit may become unnecessary.

If necessary, however, Marvell has strong grounds for appeal. For example, CMU's substantive claims are barred by the doctrine of laches; under the correct claim construction, the asserted CMU patent claims are invalid and not infringed; and even if infringement were found, any damages should have been commensurate with the nominal license fees that CMU previously obtained from others, and further, damages should be limited to allegedly infringing use of Marvell chips in the United States. [January 7, 2013]

16. What are the immediate next steps in the case?

Marvell and CMU will each submit post-trial motions to the court, concerning a variety of contested issues relating to the trial. The court has set a briefing schedule for these motions, and a hearing on these motions is scheduled to be held on May 1-2, 2013. The court will likely issue its ruling on these motions some time after the hearing. At that time, if the District Court's ruling is adverse to Marvell, Marvell will file an appeal to the Federal Circuit in Washington, D.C. The Federal Circuit is a specialized appellate court that has jurisdiction over all appeals in patent cases. The timing of an ultimate ruling from the Federal Circuit may vary depending on such factors as the status of the court's docket and the time sensitivity of the issues that are being appealed. [January 7, 2013]

### **Forward-Looking Statements**

These FAQs contain forward-looking statements that involve risks and uncertainties, including statements regarding the complex nature of the patents at issue in the CMU litigation; Marvell's non-infringement position; Marvell's own patents; the CMU patents at issue as to invalidity and infringement; reasonableness of the assessed damages; findings of the CMU damages expert; CMU's failure to meet the burden concerning the willfulness analysis and the jury's finding Marvell willfully infringed; Marvell's expectations concerning disruptions to its business or customers; matters related to the possibility of an injunction; statements about the nature and grounds for an appeal by Marvell; and statements about post-trial actions including motions and appeals processes. The forward-looking statements contained in this report are subject to risks and uncertainties, which may cause the actual outcomes or results to vary from those indicated by the forward-looking statements. These risks and uncertainties include any adverse outcomes

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of any motions or appeals against Marvell that might result in enforcement of the existing verdict unchanged or with enhancements that CMU may seek in post-trial motions and other risks and uncertainties, including those more fully described in Marvell's latest Quarterly Report on Form 10-Q for the quarter ended October 27, 2012, and other factors detailed from time to time in Marvell's filings with the SEC. Facts and circumstances referenced and asserted by Marvell are subject to change and Marvell undertakes no obligation to revise or update any of this information in respect of future events.

Originally Posted: January 7, 2013

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DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

May 31, 2013

Via Email

Dr. Sehat Sutardja  
Chief Executive Officer  
Marvell Technology Group Ltd.  
Canon's Court  
22 Victoria Street  
Hamilton HM 12, Bermuda

**Re: Marvell Technology Group Ltd.  
Form 10-K for the Fiscal Year Ended February 2, 2013  
Filed March 29, 2013  
File No.: 000-30877**

Dear Dr. Sutardja:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filing and the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Kevin L. Vaughn

Kevin L. Vaughn  
Accounting Branch Chief