

Mail Stop 6010

August 20, 2007

VIA U.S. MAIL AND FAX (818) 407-5656

Mr. Guy Avidan  
Chief Financial Officer  
MRV Communications, Inc.  
20415 Nordhoff Street  
Chatsworth, California 91311

**Re: MRV Communications, Inc.  
Form 10-K for the year ended December 31, 2006  
Filed March 6, 2007  
File No. 001-11174**

Dear Mr. Avidan:

We have reviewed your filing and have the following comments. We have limited our review to matters related to the issues raised in our comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or on any other aspects of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Year Ended December 31, 2006

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 35

Year Ended December 31, 2006 Compared to Year Ended December 31, 2005, page 39

Operating Costs and Expenses, page 42

1. Where changes in financial statement line items are the result of several factors, each significant factor should be separately quantified and discussed. For example, you say that the increase in operating costs and expenses for the Networking Group "was primarily the result of increased sales and marketing expenses, particularly related to the expansion of our North American sales organization, and share based compensation expense." However, you do not quantify the impact of each of these factors. Revise future filings accordingly to address our concerns.

Form 8-K filed July 25, 2007

2. We note that you present your non-GAAP measures and reconciliation in the form of adjusted statement of income. This format may be confusing to investors as it also reflects several non-GAAP measures, including non-GAAP operating loss, non-GAAP loss before income taxes, non-GAAP gross profit, and non-GAAP basic and diluted net loss per share, which have not been described to investors. In fact, it appears that management does not use these non-GAAP measures but they are shown here as a result of the presentation format. Please note that Instruction 2 to Item 2.02 of Form 8-K requires that when furnishing information under this item you must provide all the disclosures required by paragraph (e)(1)(i) of Item 10 of Regulation S-K, including a reconciliation to the directly comparable GAAP measure for each non-GAAP measure presented and explain why you believe the measures provide useful information to investors.

To eliminate investor confusion, please remove the adjusted statements of income from all future filings and instead disclose only those non-GAAP measures used by management that you wish to highlight for investors, with the appropriate reconciliations.

Please note that in the event that your Form 8-K is incorporated by reference into a 33 Act registration statement, we may have additional questions relating to the appropriateness of this information being included in a document filed with, and

not just furnished to, the Commission. At that time, we may request an amendment to the Form 8-K.

Form 8-K filed July 2, 2007

3. Please advise us as to when you plan to file the financial statements and any pro forma information required by Item 9.01 of Form 8-K and Rule 3-05 of Regulation S-X for your acquisition of Fiberxon, Inc. We may have further comments upon obtaining such financial statements and pro forma information.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 all information required under the Securities and Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that

- The company is responsible for the adequacy and accuracy of the disclosure in the filings;
- 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
- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

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You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3554 if you have any questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Angela Crane  
Accounting Branch Chief