



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

May 4, 2007

Jagdeep Singh
President and Chief Executive Officer
Infinera Corporation
169 Java Drive
Sunnyvale, CA 94089

**RE: Infinera Corporation
Amendment No. 3 to Form S-1
Filed on April 27, 2007
File No. 333-140876**

Dear Mr. Singh:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document 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 raise additional comments.

Management's Discussion and Analysis of Financial Condition and Results of Operations

General

1. Please refer to prior comment number 4. In light of your response to our prior comment number 6, in your next submission please expand this section for trends that discusses and discloses the future impact on revenue, cost of sales, gross margin, operating and net income of the revenue that you have deferred under SOP 97-2 to also include the impact on cost of sales, gross margin, operating and net income for inventory write-downs that have been made under ARB 43 for inventory that you believe will be sold in the future at a value greater than that reflected in inventory. In the future, if inventory is sold that has been written down in accordance with ARB 43, the income attributable to the sale of the written down inventory should be separately disclosed on the face of the financial statements and discussed in detail in the footnotes and MD&A.

Overview of Consolidated Financial Data, page 35

Gross Margin, page 38

2. Please refer to prior comment 6. Tell us why you believe that ARB 43 is applicable to your common equipment inventories. Statement 5 of Chapter 4 of ARB 43 states that a charge should be taken against inventory and revenue whenever the utility of inventory has been impaired by damage, deterioration, obsolescence, changes in price levels, or other causes. Tell us in detail why you believe that your common equipment inventories are impaired, prior to their ultimate sale, when you continue to sell it and place orders for the common equipment with your suppliers. In this regard, it is unclear why you would purchase common equipment from a supplier if there was truly “a loss of utility of these products.” We may have further comments.
3. Please tell us in detail about your business rationale for selling your common equipment at low or negative margins.
4. Please tell us in detail about the functionality of your common equipment without the higher margin network components. Tell us why you believe a customer would purchase and install your common equipment without the intention of purchasing the other network components.

Critical Accounting Policies and Estimates, page 39

Stock-Based Compensation, page 41

5. On pages 43-44, we note your continued reference to valuation specialists to assist in determining the estimated fair value of your common stock. While you are not required to make reference to this valuation specialist, when you do you should also disclose the name of the expert and include the consents of the expert. If you decide to delete your reference to the independent valuation specialist, you should revise to indicate that the method and assumptions were used by management to determine the valuation. Please revise.

Management, page 74

Compensation Discussion and Analysis, page 82

6. We note your disclosure on pages 84 and 86. So that investors may understand the kind of benchmarking information you used in determining annual executive compensation, identify all of the companies that you considered for purposes of benchmarking the elements of the named executive officers' compensation. See Regulation S-K Item 402(a)(v) and (b)(2)(xiv).

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7. We note your revisions in response to our prior comment eight. Please disclose your named executive officers' bonus or shipment targets, as applicable, or, to the extent that you believe you are not required to disclose this information according to Instruction 4 to Regulation S-K Item 402(b), discuss how difficult it will be for the executive or how likely it will be for you to achieve the undisclosed targets.

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As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment 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 Act of 1933 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.

You may contact Sharon Virga, Senior Staff Accountant, at (202) 551-3385 or Kyle Moffatt, Accountant Branch Chief, at (202) 551-3836, if you have any questions regarding comments on the financial statements and related matters. Please contact Cheryl Grant, Senior Staff Attorney, at (202) 551-3359 or me at (202) 551-3810 with any other questions.

Sincerely,

Larry Spigel
Assistant Director

cc: via facsimile (650-493-6811)
Matthew Sonsini/Wilson Sonsini Goodrich & Rosati