

Mail Stop 6010

December 14, 2006

Michael Gray
Chief Financial Officer
Mellanox Technologies, Ltd.
2900 Stender Way
Santa Clara, California 95054

**Re: Mellanox Technologies, Ltd.
Amendment No. 2 to Registration Statement on Form S-1
Filed December 7, 2006
Registration No. 333-137659**

Dear Mr. Gray:

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.

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 comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

The Offering, page 3

1. Please disclose in the bullet-point portion of this section, and the "Capitalization" section, the shares that have been reserved for issuance under the Employee Share Purchase Plan that you have disclosed on page 74. Please also describe the automatic provisions which increase the number of shares available for future issuance under that plan and disclose the maximum number of ordinary shares that may be issued under that plan.

Employee Benefit Plans and Change of Control Arrangements, page 68

2. We see from footnote 15 to your financial statements on page F-31 the executive severance benefits agreement that was approved for the company's President and Chief Executive Officer. Please disclose the material terms of that agreement and file the agreement as an exhibit to your registration statement.

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As appropriate, please amend your registration statement 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 direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any registration statement for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kevin Kuhar at (202) 551-3662 or Angela Crane at (202) 551-3554 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or me at (202) 551-3800 with any other questions.

Sincerely,

Peggy A. Fisher
Assistant Director

cc (via fax): Alan C. Mendelson, Esq.
Mark V. Roeder, Esq.