



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3720

December 2, 2008

Mr. Maurice Castonguay
Chief Financial Officer
BigBand Networks, Inc.
475 Broadway Street
Redwood City, California 94063

RE: BigBand Networks, Inc.
Form 10-K for Fiscal Year Ended December 31, 2007
Filed March 12, 2008
File No. 1-33355

Dear Mr. Castonguay:

We have reviewed your response letter dated November 21, 2008 regarding the above filing and have the following additional comment. Please address the following comment in future filings. If you disagree, we will consider your explanation as to why our comment is inapplicable or a future revision is unnecessary. Please be as detailed as necessary in your explanation. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 37

Overview, page 37

1. We note your response to comment one in our letter dated November 6, 2008. However, we still believe you should specifically identify a material customer that accounts for a substantial percentage (in excess of 10%) of your revenues in your most recently completed fiscal year. We note that you have identified your three customers that each accounted for over 10% of your revenues; however, one customer, whose identity may be deduced from your disclosure, accounted for a significantly greater amount of revenues than the other two. We disagree that the identity of such customer would be confusing to investors and feel such disclosure is required so investors may completely assess the

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significance of this relationship. Please identify any such material customer in future filings.

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Please respond to this comment through correspondence over EDGAR within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comment and provides any requested information. Detail letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

Please contact John Harrington, Attorney-Advisor, at (202) 551-3576 or me at (202) 551-3810 with any other questions.

Sincerely,

/s/ Larry Spigel
Assistant Director

cc: J. Robert Suffoletta, Esq.
Wilson Sonsini Goodrich & Rosati
Via facsimile: (650) 493-6811