

Mail Stop 4561

December 22, 2006

Mr. Kevin A. DeNuccio
Chief Executive Officer and President
Redback Networks Inc.
300 Holger Way
San Jose, CA 95134

**Re: Redback Networks Inc.
Form 10-K for the Fiscal Year Ended December 31, 2005
Form 10-Q for the Quarterly Period Ended March 31, 2006
Form 10-Q for the Quarterly Period Ended June 30, 2006
Form 10-Q for the Quarterly Period Ended September 30, 2006
File No. 000-30961**

Dear Mr. DeNuccio:

We have reviewed the above-referenced filings and your response letter dated November 17, 2006 and have the following comments. Please note that we have limited our review to the matters addressed in the comments below. We may ask you to provide us with supplemental information so we may better understand your disclosure. Please be as detailed as necessary in your explanation. 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2005

Note 2. Organization and Summary of Significant Accounting Policies

Revenue Recognition, page 60

1. We note your response to prior comment number 4 with respect to your conclusion that software is incidental to your SmartEdge products as a whole. Please address the following additional comments with respect to your analysis supporting your conclusion:
 - Your response indicates that your SmartEdge products are sold with post-contract

support (PCS). Your response also indicates that your PCS does not include rights to unspecified software upgrades. Therefore, please clarify whether you have or have not concluded that you provide PCS as defined by SOP 97-2. Please clarify how you considered the PCS you provide includes software bug fixes and patches when making your determination. Please advise.

- Your response states that you have incurred \$22 million and \$12 million of software research and development costs for the year ended December 31, 2005 and the six months ended June 30, 2006, respectively. Therefore, it appears that software research and development costs represent approximately 13% and 9% of total costs incurred for the year ended December 31, 2005 and the six months ended June 30, 2006, respectively. As such, since it appears that you have incurred significant costs within the scope of SFAS 86, clarify how you have considered this indicator when concluding that your software is incidental to your SmartEdge products as a whole. Refer to footnote 2 of SOP 97-2.
2. We note the portion of your responses to prior comment numbers 4 and 5 which indicate that the elements contained within two SmartEdge arrangements are in the scope of SOP 97-2. Clarify how you determined that the software contained in the products sold in these two arrangements is more than incidental to those products as a whole. As part of your response, please clarify how the SmartEdge products sold in these arrangements are different than your typical SmartEdge product sale. That is, besides including the right to a future specified software deliverable, explain how the software contained within the SmartEdge product delivered is different than that included in your typical SmartEdge product delivered. In addition, please explain the nature of the future specified software deliverable element in these arrangements. Clarify the additional functionality this element will provide to the delivered SmartEdge product. Explain whether you concluded this deliverable is a specified upgrade right or specified additional software product.

Form 10-Q for the Quarterly Period Ended June 30, 2006

Note 5. Income Taxes, page 13

3. We note the portion of your response to prior comment number 14 which clarifies your accounting for income taxes for your fiscal year 2006 interim periods. Your response states, “we calculated an estimated annual tax rate based on an annual forecast of ordinary income (excluding nondeductible amortization expense for acquired intangibles) and applied the estimated annual tax rate to the six months year-to-date ordinary income (excluding nondeductible amortization expense for acquired intangibles).” We further note that you have provided two reasons why you have accounted for your income taxes in this manner. Please address the following additional comments with respect to the reasons underlying your conclusions:

- Your response indicates that the inclusion of amortization expense creates a pre-tax loss which then results in arbitrary distortions in the customary relationships between income tax expense and pre-tax income. Please further clarify why you believe that nondeductible amortization expense for acquired intangibles should be excluded from pre-tax loss when computing your ordinary income (loss). In this respect, please clarify how your definition of ordinary income (loss) complies with paragraph 5.a of FIN 18. Clarify how calculating taxes applicable to ordinary income in this manner accurately allocates income tax expense to the proper periods and reflects your estimated annual effective tax rate for fiscal year 2006.
 - Your response indicates that the expense results in no net income tax provision or benefit because associated deferred tax liabilities recorded in accordance with SOP 90-7 are reversed to the tax provision as the nondeductible amortization expense is recorded. Please clarify why these deferred tax liabilities were recorded in accordance with SOP 90-7. Further clarify the manner in which these deferred tax liabilities are reversed. Clarify whether you have consistently calculated your effective tax rate since emerging from bankruptcy on January 3, 2004 in this manner. Clarify whether you excluded nondeductible amortization expense for acquired intangible assets in fiscal years ended December 31, 2004 and 2005 when computing your effective rate. In this respect, clarify why you began reporting this income tax expense in fiscal year 2006.
4. Refer to your response to prior comment number 14. Please clarify whether you have estimated your effective rate separately for your operations taxable in multiple domestic and foreign jurisdictions. If so, clarify how your accounting complies with paragraph 22 of FIN 18, which requires you to compute interim period tax (or benefit) related to ordinary income (or loss) for the year-to-date using one overall estimated annual effective rate, except in certain specified circumstances.

Note 10. Commitments and Contingencies

Stock Option Inquiry, page 17

5. We have read your response to prior comment number 15, including the materiality analysis prepared pursuant to SAB 99, and note that you have concluded that the impact of the stock option grants was not material to any prior period or prior years or expected to be material to the current year. We note that this error caused a 5.6% overstatement in net loss for the quarter-ended June 30, 2006. Your response indicates, in part, that this error is not expected to be material to the current year. Please clarify how your analysis considered the impact of the error on the second quarter of fiscal year 2006. In this respect, please clarify how you concluded that the impact of the error is not material to the quarter ended June 30, 2006.

Form 8-K filed October 19, 2006

6. Refer to prior comment 17. We continue to note your use of the non-GAAP measure of pre-tax income excluding stock-based compensation in your Form 8-K for the period ended September 30, 2006. Please advise how you have addressed the disclosure requirements of Item 10(e)(1)(i) of Regulation S-K with regard to this non-GAAP measure. Specifically, your presentation of this measure should be accompanied by a reconciliation to the most comparable GAAP measure and a comprehensive explanation of the usefulness of such measure.

As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. You may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter with any amendment that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing any amendment and your 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 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 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
- 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.

Mr. Kevin A. De Nuccio
Redback Networks Inc.
December 22, 2006
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You may contact Christopher White, Staff Accountant, at (202) 551-3461, Melissa Walsh, Senior Staff Accountant, at (202) 551-3224 or me at (202) 551-3488 if you have any questions regarding our comments on the financial statements and related matters.

Sincerely,

Stephen Krikorian
Accounting Branch Chief