

Mail Stop 4561

February 17, 2010

Tyler Wall
Vice President and General Counsel
Brocade Communications Systems, Inc.
1745 Technology Drive
San Jose, CA 95110

**Re: Brocade Communications Systems, Inc.
Form 10-K for Fiscal Year Ended October 31, 2009
Filed December 14, 2009
File No. 000-25601**

Dear Mr. Wall:

We have reviewed the above-referenced filing and your response letter dated February 10, 2010. If 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Item 11. Executive Compensation (Incorporated by Reference from Preliminary Proxy Statement on Schedule 14A, filed February 3, 2010)

Executive Compensation Philosophy and Objectives

Competitive Positioning, page 27

1. We note that your Compensation Committee considers the compensation practices of the peer group you have identified on page 28, when setting the compensation levels for your named executive officers. However, your discussion of the various elements of compensation, such as base salaries and the target annual cash incentive opportunities, does not specifically explain how you arrived at the actual amounts paid for each named executive officer or how those amounts compare to the benchmark used. Please expand your disclosure accordingly. Where actual payments were above or below the benchmark, your disclosure should discuss the reasons for any material variations.

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2. It appears from your disclosure that individual performance was also considered in setting compensation levels; however, you have not included a discussion of how individual performance affected compensation for each of the named executive officers. Please expand your disclosure. Further, please describe the elements of individual performance that were taken into consideration in establishing, for example, base salary and annual cash incentives, and any other elements of compensation for which individual performance was a factor. Refer to Item 402(b)(2)(vii) of Regulation S-K.

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Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Stephani Bouvet at (202) 551-3545 if you have any questions regarding the above comments. If you need further assistance, you may contact me at (202) 551-3735.

Sincerely,

Barbara C. Jacobs
Assistant Director

cc: Via facsimile to: (650) 493-6811
Katharine A. Martin, Esq.
Wilson Sonsini Goodrich & Rosati