



DIVISION OF
CORPORATION FINANCE

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

August 20, 2010

Stephen J. Wiehe
President and Chief Executive Officer
SciQuest, Inc.
6501 Weston Parkway, Suite 200
Cary, North Carolina 27513

Re: SciQuest, Inc.
Amendment No. 4 to Registration Statement on Form S-1
Filed August 5, 2010
File No. 333-165720

Dear Mr. Wiehe:

We have reviewed the above-referenced filing and the related response letter dated August 5, 2010 and have the following comment. If indicated, we think you should revise your document in response to this comment. After reviewing this information, we may raise additional comments. Unless otherwise noted, where a prior comment is referred to, it refers to our letter dated July 16, 2010.

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

Critical Accounting Policies

Stock-Based Compensation

April 2010 Grants, page 48

1. We note your revisions made in response to prior comment 2. Revise your disclosure to clarify the reasons for the increase in the enterprise values of the comparable companies. That is, you might disclose that those values increased over the period due to increases in the underlying quoted stock prices of the comparable companies. Additionally, explain why the narrowing of guideline companies used to the upper quartile revenue multiple instead of the mean represents companies that are more comparable to your company. In this regard, explain why you believe that the prior valuations should not have used the same guideline companies used in the April 2010 valuation if they are companies that are more comparable to your business.

You may contact Tamara J. Tangen, Staff Accountant, at (202) 551-3443 or, in her absence, Stephen G. Krikorian, Accounting Branch Chief at (202) 551-3488 if you have questions regarding comments on the financial statements and related matters. Please contact

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Ryan Houseal, Attorney-Advisor at (202) 551-3105 or me at (202) 551- 3735 with any other questions.

Sincerely,

Barbara C. Jacobs
Assistant Director

cc: Via Facsimile: (404) 365-9532
Grant W. Collingsworth, Esq.
Seth K. Weiner, Esq.
Morris, Manning & Martin, LLP