



June 25, 2010

Via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
One Station Place
100 F Street, NE
Washington, D.C. 20549-4561

Re: Aspen Technology, Inc.
Form 10-K for the Fiscal Year Ended June 30, 2009 (Filed November 9, 2009 and amended April 22, 2010)
Form 10-Q for the Fiscal Quarter Ended December 31, 2009 (Filed February 9, 2010)
File No. 000-24786

Ladies and Gentlemen:

This letter is being filed by Aspen Technology, Inc. (the "Company") in response to comments set forth in a letter dated June 15, 2010 from Kathleen Collins, Accounting Branch Chief of the Division of Corporation Finance of the Securities and Exchange Commission (the "SEC"), to Mark P. Sullivan, Senior Vice President and Chief Financial Officer of the Company.

For convenient reference, the Company has set forth below in italics each of the comments of the staff of the SEC set forth in the comment letter and has keyed the Company's responses to the numbering of the comments and the headings used in the comment letter.

Form 10-K/A for the Fiscal Year Ended June 30, 2009

Item 11. Executive Compensation

Compensation Discussion and Analysis

2009 Operations Plan, page 18

- In your response to prior comment 4, you briefly describe the "regional contribution margin" and "regional operating margin" targets used to determine the bonus payable to Mr. Kotzabasakis under the 2009 Operations Plan, and you provide these target amounts for fiscal 2009. In your response letter and future filings, please clarify which region(s) these metrics cover, and disclose actual achievement against the targets, in each case to the extent material to an understanding of the company's compensation policies and procedures for its named executive officers.*

The regional contribution margin and regional operating margin targets used to determine the bonus payable to Manolis Kotzabasakis under the 2009 Operations Plan were a compilation from the three geographic regions in which the Company operates (Europe, Middle East and Africa; Asia-Pacific; and North and Latin America), plus the functional segments established by the Company for global accounts and pharmaceutical sales. The actual achievement was 74% of the contribution margin goal and 41% of the operating margin goal. The Company confirms that, to the extent material to an understanding of its compensation policies and procedures for its named executive officers, in future filings it will specify the regions covered by performance targets used to determine bonuses payable to named executive officers, and will disclose the actual achievement against those targets.

Form 10-Q for the Fiscal Quarter Ended December 31, 2009

Condensed Consolidated Statements of Operations, page 2

- Please provide us with your allocation of revenue for co-terminus arrangements through March 31, 2010. Additionally, please confirm that you will disclose your allocation methodology for these arrangements in future filings when they become material. Finally, please explain why the percentage of revenue allocated to services was only 4% of the total revenue recognized for co-terminus arrangements for the six months ended December 31, 2009. In this regard, please explain if this percentage differs in comparison to the percentage of services to total revenue for your legacy arrangements.*

SMS revenue for the nine months ended March 31, 2010 totaled \$0.3 million from co-terminus arrangements.

The most significant portion of co-terminus arrangements sold during the nine month period ended March 31, 2010 is for multi-year agreements. In most cases these arrangements include annual payments, with the first annual payment typically due within 30 to 60 days of shipment, and follow-on annual payments typically due on the anniversary date of the arrangements. The entire portion of the annual payment allocated to license revenue is recognized on the invoice due date, since we have not established a history of collecting under the terms of these new arrangements. The portion of the annual payment allocated to SMS revenue is deferred and recognized ratably over the term of the invoiced period. Since the entire portion of the annual payment allocated to license revenue is recognized upon the installment due date and the allocated SMS revenue is recognized ratably over the invoiced period, SMS revenue as a percentage of the related license revenue will be relatively small. The SMS fee that we charge our customers for these co-terminus arrangements as a

percentage of the license fee is consistent with the SMS rate that we charge our customers as a percentage of the license fee for legacy arrangements. Deferred SMS revenue related to these contracts as of March 31, 2010 was approximately \$0.9 million.

The Company confirms that the SMS revenue allocation methodology for these arrangements will be disclosed in future filings when they become material.

If you would like to discuss our responses or any further questions you may have, please do not hesitate to contact me at 781-221-5201.

Respectfully,

/s/ Mark P. Sullivan

Mark P. Sullivan
Senior Vice President and Chief Financial Officer

cc (with enclosures):

Kathleen Collins, Accounting Branch Chief, Securities and Exchange Commission
Melissa Feider, Staff Accountant, Securities and Exchange Commission
Katherine Wray, Staff Attorney, Securities and Exchange Commission
Mark E. Fusco, President and Chief Executive Officer, Aspen Technology, Inc.
Frederic G. Hammond, Senior Vice President and General Counsel, Aspen Technology, Inc.
Mark L. Johnson, Cooley LLP