



May 27, 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 May 13, 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 (the "Staff") 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 for the Fiscal Year Ended June 30, 2009

Item 1. Business

General

- We note your response to prior comment 1, in which you acknowledge that your business is materially dependent on the System License Agreement with the Massachusetts Institute of Technology, as amended. However, this license does not appear to be discussed in your Form 10-K, as originally filed or amended. As stated in our prior comment, your business disclosure should discuss any material third-party licenses. Accordingly, please ensure that your future filings discuss the material terms of the System License Agreement and any other material license agreements. Please confirm your understanding in this regard.*

The Company acknowledges the Staff's comment, confirms our understanding in this regard, and will include such disclosure in future filings.

Item 15. Exhibits and Financial Statement Schedules

Note 3. Restructuring Charges, page F-23

- We note from your response to prior comment 10 that you "consider" all current and future charges in determining the initial measurement of fair value of your restructuring charges. We believe the intent of ASC 420-10-50-1(a) and (b)(1) is to disclose an estimate of restructuring charges you expect to incur and their completion date. In this regard, we believe that if you have any plans to incur additional restructuring charges but did not meet the criteria for recognizing and measuring the restructuring charges as of your latest balance sheet date, then you should provide these disclosures. This disclosure would not include revisions to timing or estimates to currently accrued charges.*

The Company did not have any plans to incur additional restructuring charges that did not meet the criteria for recognition or measurement as of June 30, 2009, or the latest balance sheet date, March 31, 2010. Activity related to restructuring plans in fiscal 2010 has been solely related to revisions of previously accrued charges. The Company acknowledges the Staff's comment and will include disclosure in future filings for any expected restructuring activities that do not meet the recognition and measurement criteria.

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

Item 11. Executive Compensation

Compensation Discussion and Analysis

Reasons for Providing, and Manner of Structuring, the Key Compensation Elements in Fiscal 2009

Variable Cash Compensation, page 17

3. You disclose that “operating margin” or “operating income” is one of the corporate financial targets used to determine cash incentive compensation for your named executive officers, and you briefly describe how this figure is calculated from the company’s income from operations. As the “operating income” metric used to determine executive compensation appears to be a non-GAAP financial measure, please clearly identify it as such, if applicable, in future filings. Refer to Instruction 5 to Item 402(b) of Regulation S-K.

The Company acknowledges the Staff’s comment and will clearly identify this metric as a non-GAAP financial measure in future filings.

2009 Operations Plan, page 18

4. We note the revisions to your Compensation Discussion and Analysis made in response to prior comments 6 and 7. You have provided quantitative disclosure of the operating income target used to determine 70% of the bonuses payable to four of your named officers under the 2009 Executive Plan, as well as of the actual achievement against this target. However, you do not appear to have provided quantitative or sufficient qualitative disclosure of the commission element that you indicate constitutes 75% of the bonus payable to Mr. Kotzabasakis under the 2009 Operations Plan. In your response letter and in future filings, as applicable, please explain more specifically the “regional operating and contribution margins” and “quarterly regional or consolidated financial results” used to determine the bonus payable to Mr. Kotzabasakis. In addition, please confirm, if true, that you have omitted quantitative disclosure of these performance targets pursuant to Instruction 4 to Item 402(b) of Regulation S-K and that you have a competitive harm analysis that supports your reliance on this instruction.

Under the 2009 Operations Plan, 75% of the target bonus of Manolis Kotzabasakis was attributable to a commission element. The commission element consisted of two portions:

- Regional contribution margin comprised 60% of the total target bonus (or 80% of the total target bonus attributable to the commission element). The regional contribution margin was calculated from draft (internal-use) financial statements, available in July 2009 when the bonus computations were made, and was compiled on a direct profit-and-loss basis, using regional revenue, cost of revenue, direct selling and certain other direct expenses.
- Regional operating margin comprised 15% of the total target bonus (or 20% of the total target bonus attributable to the commission element). The regional operating margin was calculated from draft (internal-use) financial statements, available in July 2009 when the bonus computations were made. Regional operating margin is equal to regional contribution margin (defined above) less expenses that are not direct to the regions, such as corporate expenses. Accordingly, regional operating margin is equivalent to the company’s consolidated operating income.

Any target bonus attributable to the commission element was to begin funding on a dollar-for-dollar basis against regional contribution margin and the regional operating margin. Payments were to be made according to performance on a linear basis, with the sum of the payments equaling the achievement of the annual goals for each commission element, up to a threshold of 150%. For example, 10% of the commission element attributable to regional contribution margin was to become payable upon the Company’s achievement of 10% of the annual goal for regional contribution margin. The commission element was to be measured and paid on a quarterly basis.

The Company will include in future filings as applicable specific explanation of the regional operating and contribution margins and quarterly regional or consolidated financial results used to determine bonuses payable.

The goals for regional contribution margin and regional operating margin are specified in an appendix to the 2009 Operations Plan. The regional contribution margin goal was \$275,274,249, and the operating margin goal was \$114,852,631. The Company has re-evaluated the composition of these metrics in light of the Staff’s further comment, and confirms that the Company will report these metrics (or any similar applicable metrics), as appropriate, in future filings.

Item 13. Certain Relationships and Related Transactions

Related-Party Transactions, page 32

5. We note the disclosure added to your Form 10-K, as amended, in response to prior comment 9 and pursuant to Item 404 of Regulation S-K. In particular, we note your disclosure on page 33 that the board has determined that a “transaction that is specifically contemplated by provision of [y]our charter or bylaws” does not create a material direct or indirect interest on behalf of related persons and, therefore, is not related person transactions for purposes of your review policy. Please explain more specifically what sort of transaction is contemplated by this exception from the definition of related person transactions under your policy, and how the board determined that such transactions do not create a material direct or indirect interest on the part of related persons within the meaning of Item 404(a), such that it is appropriate to exclude such transactions from review as related-party transactions. Further, please confirm that your statement on page 32 that there were no related-party transactions from July 1, 2008, through March 5, 2010, applies to all related-party transactions required to be disclosed pursuant to Item 404(a), notwithstanding the aforementioned exception for transactions contemplated by your charter documents. Provide clarifying disclosure on this matter in future filings.

Any provision of the Company’s charter necessarily must have been approved previously by the board of directors and stockholders of the Company, and any provision of the Company’s by-laws necessarily must have been approved previously by the board of directors or the stockholders of the Company. As a result, if any provision of the charter or by-laws specifically contemplates a transaction that might be construed as a related-party transaction, that transaction in effect has been approved previously by the board of directors, the stockholders or both. Moreover, the board cannot preclude the occurrence of any such transaction, which makes board review of the transaction ineffectual. In effect any such transaction was evaluated and reported, if appropriate, as a related-party transaction at the time the charter or by-law provision was adopted.

This exception to the related-party review process has not been invoked or relied upon at any time, including at any time since July 1, 2008. As a result, there were no related-party transactions from July 1, 2008 through March 5, 2010 required to be disclosed pursuant to Item 404(a) that were not disclosed as a result of the exception for transactions contemplated by the Company’s charter or by-laws.

Management anticipates that, in light of the Staff’s disclosure concerns and the inapplicability of the exception to date, the Company will modify its disclosures in future filings in order to confirm that no related-party disclosures have been omitted as a result of the exception for related-party transactions contemplated by the Company’s charter or by-laws.

6. We note from your response to prior comment 14 that you allocate point product licenses with SMS included for the full license term (i.e., your co-terminus arrangements) between software and services and other revenue based on vendor specific evidence ("VSOE") of fair value. Please clarify your methodology for allocating this revenue stream. In this regard, please tell us if you allocate these arrangements using VSOE from your other arrangements (e.g., your perpetual license or legacy license arrangements), how you determined your methodology was reasonable, and if you have consistently applied it.

As noted in our prior response to comment 14, the Company continues to offer term licenses for specifically defined sets of point products that are components of the aspenONE suite. Beginning in fiscal year 2010, the Company changed the primary manner in which SMS is sold to customers on point product term licenses by bundling point product licenses with SMS for the entire term of the arrangement ("co-terminus arrangements"). Prior to fiscal year 2010, SMS was bundled for the initial year of the term arrangement and was renewed annually, at the customers' option, for the remaining term of the arrangement ("legacy term license arrangements"). The Company concluded that there was appropriate evidence to support VSOE of fair

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value for SMS on legacy term licenses based upon an analysis of stand-alone SMS renewals using the bell-shaped curve approach.

The Company sells (1) renewal SMS on legacy term license arrangements and (2) new multi-year co-terminus arrangements. Therefore, the Company evaluated whether we have VSOE on our co-terminus arrangements based upon the stand-alone SMS renewal evidence from our legacy term license arrangements. The Company considered the guidance in ASC 985-605-55-62 and 63, which allows for the use of optional renewals of SMS in multi-year, term-based license arrangements to establish VSOE of fair value for SMS for multi-year arrangements. As the Company has sufficient evidence of the consistency of stand-alone pricing on our SMS renewals for our multi-year legacy term license arrangements, we determined that the example discussed in this guidance could be applied to our co-terminus arrangements. Additionally, the Company considered the guidance in ASC 985-605-55-57 and 58, which concludes that a one year SMS renewal rate on a perpetual license could be used to establish VSOE of fair value for SMS on other perpetual arrangements for a period longer than one year. Although this guidance refers to perpetual licenses, we believe that a similar analogy may be made to the Company's legacy term license arrangements and co-terminus arrangements, where VSOE for the annual SMS renewal rate of legacy term license arrangements are being used to establish VSOE for co-terminus arrangements for periods longer than one year. Based upon the evaluation of the guidance noted above, the Company concluded that it is appropriate to use optional renewals of SMS on legacy term license arrangements to support VSOE for SMS bundled in co-terminus arrangements and has consistently applied this allocation methodology.

7. Additionally, the figures provided in your response for revenue and cost of revenue classified within software, subscription, and services appear to be for all arrangements, as the information reconciles with your consolidated financial statements. Please provide us with the information that we previously requested only for your co-terminus arrangements. If these arrangements are material, then please tell us how you considered disclosing the allocation methodology used to classify the arrangement.

As noted in the response to comment 6 above, the Company began selling point product term licenses bundled with SMS for the full term of the arrangement as part of our standard product offering in the first quarter of fiscal 2010, and therefore, did not have significant co-terminus transactions bundled in this manner in prior years. For the first half of fiscal 2010, the Company recognized \$2.3 million of license revenue and \$0.1 million of SMS revenue related to co-terminus license arrangements, which was considered immaterial for purposes of additional disclosure of the revenue recognition allocation methodology. The Company does not separately identify and report the cost of revenue related to co-terminus licenses from the cost of software revenue, primarily because there is not a meaningful way to differentiate the royalty and amortized development costs related to co-terminus licenses. Additionally, the cost of co-terminus licenses does not represent a significant cost overall and we do not believe that allocating it formulaically would provide any additional insight to investors at this time.

We believe that our responses adequately address the matters referenced in your May 13, 2010 comment letter. 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 Godward Kronish LLP

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