

Mail Stop 4561
Via Fax (781) 221-6410

March 12, 2010

Mark P. Sullivan
SVP and Chief Financial Officer
Aspen Technology, Inc.
200 Wheeler Road
Burlington, MA 01083

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

Dear Mr. Sullivan:

We have reviewed the above-referenced filings and have the following comments. 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.

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 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 June 30, 2009

Item 1. Business, page 3

General

1. Your risk factor disclosure on page 25 indicates that some of your software products incorporate or otherwise require technology licensed from third parties, and that any interruption in the supply of any such third-party software could materially adversely

affect your business. We also refer to your contractual obligations table on page 55 that lists the company's royalty obligations. We were unable, however, to locate a discussion of third-party licenses in the business section. To the extent your business is materially dependent on any third-party licenses, the agreements and their material terms should be discussed in the business disclosure. Please advise. In addition, it appears that you have not filed as exhibits to your Form 10-K any of these license agreements, other than the System License Agreement with the Massachusetts Institute of Technology and amendment thereto filed as Exhibits 10.4 and 10.5. Please provide us with your analysis, in quantified terms if possible, as to whether you are required to file any other of your material third-party licenses as exhibits to your Form 10-K pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk, page 59

2. You disclose you are exposed to foreign exchange rate fluctuations for the Euro, British Pound Sterling, Canadian Dollar, and Japanese Yen. As your net transaction gains and losses from foreign currency appear to be material to earnings per share, tell us how you considered providing a sensitivity analysis or other quantitative presentation of the potential impact of changes in foreign exchange rates pursuant to Item 305 (a)(1) of Regulation S-K.

Item 11. Executive Compensation

Compensation Discussion and Analysis

General

3. Revise to disclose clearly how you determine the amount to pay for each material element of compensation. See Item 402(b)(1)(v)-(vi) of Regulation S-K. As an example only, we note that you have provided a general discussion of your annual cash bonus plans and explained how various corporate financial and individual performance factors are weighted in determining payouts under each plan. This discussion should be expanded to set forth the actual amounts, if any, awarded under the cash bonus plans and to provide substantive analysis and insight into how the compensation committee determines the actual size of cash bonus payments, as well as the threshold, target and maximum award amounts. As it appears from your summary compensation table that no amounts were awarded to your named executive officers pursuant to the Executive Plan for fiscal 2009, please disclose why not.

Objectives and Philosophy of Our Executive Compensation Program, page 73

4. You disclose that the compensation committee reviews compensation practices at the identified peer companies in making compensation decisions, and your disclosure on page 75 indicates that the committee engages in benchmarking of base salaries for your

executives against the median of the range of similarly-situated executives at the peer companies. Please clarify whether the company engages in benchmarking with respect to total compensation, or any other material element of compensation besides base salaries, for your named executive officers. We note in this regard your general disclosure on page 77 that your compensation committee “considers” peer group data in determining the size of equity grants to your executives. For each applicable material element of compensation, identify the benchmark and disclose where actual payments fell in comparison to the targeted benchmark. To the extent actual compensation was outside the targeted range, please explain why. If you do not benchmark compensation other than with respect to base salaries, please clarify the manner in which you utilize the information regarding compensation practices from the peer group.

Base Salary, page 75

5. Further to the above comment, please disclose where actual base salaries for your named executive officers for fiscal 2009 fell relative to the targeted peer-group median and explain any significant deviations from the targeted benchmark.

Annual Cash Bonus, page 75

6. It appears from your disclosure that certain corporate performance targets were material to the company’s executive compensation policies and decision-making processes for fiscal 2009, in particular its determination of cash bonuses for named executive officers pursuant to the Executive Plan and the Operations Plan. It further appears that you have not provided quantitative disclosure of the terms of these performance targets in reliance on Instruction 4 to Item 402(b) of Regulation S-K. In your response letter, please confirm, if true, that the target information was omitted on this basis and that you have a competitive harm analysis that supports your reliance on that instruction; or advise.
7. Further, to the extent that you are relying on Instruction 4 to Item 402(b) to omit performance target disclosure, please provide meaningful disclosure of the level of difficulty of attaining such targets. In this regard, the following disclosure does not appear to sufficiently address the disclosure requirement: “The threshold level for being awarded a bonus pursuant to the Executive Plan can be characterized as demanding, while the maximum goal contemplates compliance with challenging requirements.”

Executive Compensation Tables

Summary Compensation Table, page 85

8. Your summary compensation table discloses that the company awarded discretionary bonuses of \$350,000, \$192,500, and \$70,000 to Messrs. Fusco, Pietri and Hammond,

respectively, for fiscal 2009. We note also your disclosure on page 87 that the compensation committee “approved funding a discretionary bonus pool for employees who did not participate in a commission-based incentive plan” and that the committee made awards from this bonus pool to Messrs. Fusco, Pietri and Hammond. Please expand your disclosure to provide a materially-complete analysis of the specific factors considered by the compensation committee in awarding these bonuses. The current disclosure does not provide adequate qualitative or quantitative disclosure of the contributions or the documented goals that the committee considered in determining to award the bonuses; nor does it describe the reasons the committee believes the amount paid to each named executive officer is appropriate in light of the various items it considered in awarding discretionary bonuses.

Item 13. Certain Relationships and Related Transactions, page 94

9. You do not appear to have provided the disclosure required by Item 404 of Regulation S-K with respect to your transactions with related persons and policies for review, approval or ratification of such transactions. Please revise or advise.

Item 15. Exhibits and Financial Statement Schedules

Note 3. Restructuring Charges, page F-23

10. Tell us how you considered providing the total amount of restructuring charges you expect to incur in connection with your various restructuring plans, if material, pursuant to paragraph ASC 420-10-50 (paragraph 20(b)(2) of SFAS 146).

Note 8. Stock Based Compensation, page F-32

11. We note from your disclosures beginning on page F-35 that you made various modifications to certain options in December 2006, May 2007, and December 2007. Please describe these modifications in further detail and explain how you determined compensation expense was not required to be recorded as a result of these modifications. In addition, please tell us if and when you reversed the \$1 million contingent liability you recorded in the fourth quarter of fiscal 2006 for anticipated plans to assist affected employees with their tax obligations or adjusting the terms of their original option grant (see page iii of your amended Form 10-K for fiscal 2006).

Signatures, page 105

12. We note that Mr. Fusco and Mr. Sullivan have signed the Form 10-K for the registrant, and that Mr. Fusco has signed in his individual capacity as chief executive officer. However, Mr. Sullivan has not signed in his individual capacity as principal financial and accounting officer, as required. Please revise to conform with the requirements of General Instruction D to Form 10-K, or advise.

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

General

13. Beginning in fiscal 2010, we note that a significant percentage of your revenues are generated from software-enabled service arrangements. Tell us if you plan to disclose the total contract value of all your non-cancellable software-enabled services contracts (i.e. backlog) pursuant to Item 101(c)(1)(viii) of Regulation S-K in your fiscal 2010 Form 10-K. If not, please tell us why you believe such disclosure is not considered necessary. Also, to the extent that bookings are (or become) a key indicator used by management to monitor your business, then tell your consideration to include both a quantitative and qualitative discussion of this metric in your future MD&A disclosures. If you do not believe bookings are a key metric, then please explain why. Refer to Item 303(a)(3) of Regulation S-K and SEC Release 33-8350.

Condensed Consolidated Statements of Operations, page 2

14. We note from your disclosures on page F-9 that software license revenue and cost of revenue includes “. . . license revenue recognized over the term of the license agreements for fixed-term contracts including point product licenses with SMS bundled for the entire license term; and other license revenue derived from transactions that are being recognized over time as the result of not previously meeting one or more of the requirements for recognition under the upfront revenue model.” Tell us how you considered classifying revenue and cost of revenue for these bundled arrangements separately (i.e. in a similar manner as your subscription arrangements) pursuant to Rule 5-03(b)(1) of Regulation S-X. In your response, please provide us with the amount of revenue and cost of revenue recognized for these arrangements for the six months ended December 31, 2009, fiscal 2009, and fiscal 2008.

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Please 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. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response to our comments 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 response 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

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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.

You may contact Melissa Feider, Staff Accountant, at (202) 551-3379 or me at (202) 551-3499 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Katherine Wray, Staff Attorney, at (202) 551-3483.

Sincerely,

Kathleen Collins
Accounting Branch Chief