

Room 4561
via fax (617) 949-1393

February 28, 2006

Mark Fusco
President and Chief Executive Officer
Aspen Technology, Inc.
Ten Canal Park
Cambridge, MA 02141

Re: Aspen Technology, Inc.
Form 10-K for Fiscal Year Ended June 30, 2005
Forms 10-Q for Fiscal Quarter Ended September 30, 2005 and
December 31, 2005

Dear Mr. Fusco:

We have reviewed the above referenced filing and have the following comments. Please note that we have limited our review to the matters addressed in the comments below. Where 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 or may not 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 Year Ended June 30, 2005

Management Report on Internal Control over Financial Reporting,
page
M-1

1. We note for each of the identified material weaknesses noted in Management's Report on Internal Control over Financial Reporting you state, "As of a result of these identified weaknesses, material post-closing adjustments have been posted to the Company's books and records and its financial statements. These adjustments, which are reflected in the accompanying financial statements for the year ended, June 30, 2005, caused increases or decreases to accounts receivable, cash, accrued expenses, revenue and general and administrative expenses." Are you referring to post-closing adjustments that were made to the June 30, 2005 audited financial statements? If so, tell us how you determined none of these adjustments related to prior periods and how you determined that restatement of the financial statements in previously filed Forms 10-Q was not required.

Note 1. Operations

(m) Intangible Assets, Goodwill and Impairment of Long Lived Assets,
page F-15

2. We note your reference to an independent third party that was used

to value the Company's three reporting units. Please note that when you refer to an independent valuation specialist you need to disclose the name of expert and include the expert's consent with the filing. Refer to Section 436(b) of Regulation C. Alternatively, you may remove this reference. Please tell us how you plan to comply with this requirement.

Note 4. Acquisitions and Dispositions

(a) Dispositions During Fiscal Year 2005, page F-22

3. Tell us how the Company considered the guidance in paragraph 41 of SFAS 144 in determining whether the sale of your AXSYS product line to Bentley Systems and your operator training business and ownership rights to the intellectual property to the Hyprotech engineering products to Honeywell should be classified as discontinued operations. In this regard, we note your disclosures in Note 12 where you state, "The Company also evaluates certain subsets of business segments by vertical industries as well as by product categories."

Note 7. Preferred Stock

Series D Redeemable Convertible Preferred Stock, page F-25

4. Tell us how you evaluated the conversion feature associated with the Series D Stock to determine whether it was an embedded derivative that met the criteria for bifurcation under SFAS 133. In this regard, tell us how you considered the criteria in paragraph 12(a) - - 12(c) of SFAS 133 and specifically tell us how you applied the guidance in paragraph 61(1) in your analysis. Also, tell us how you considered the scope exception of paragraph 11(a) of SFAS 133 in your analysis. Specifically, we note in your disclosure that the Series D Redeemable Convertible Preferred Stock (Series D Stock) includes anti-dilution rights that will adjust the conversion ratio downwards in the event that certain additional securities are issued at a price per share less than the current conversion price in effect. Tell us how you considered these provisions in determining whether the embedded derivative qualified as a conventional convertible instrument and met the scope exception of paragraph 4 of EITF 00-19. Include in your response, your consideration of EITF 05-2. Also include your analysis under paragraphs 12-32 of EITF 00-19, as necessary. In this regard, we note from your disclosures on page 25 that the Series D preferred stock contains registration rights provisions. Do they also contain liquidated damages provisions? Tell us how you considered these provisions in your analysis. If the scope exception of paragraph 11(a) is not met, tell us whether you have considered the conversion feature to be an embedded derivative that is subject to classification and measurement at fair value. Also, please be advised that a beneficial conversion feature is not applicable when the conversion feature is bifurcated.

5. We note that in connection with the Series D Stock, you also issued warrants. Tell us how you analyzed the warrants pursuant to SFAS 133 and EITF 00-19. In this regard, tell us whether the Company determined that the warrants met the scope exception of paragraph 11(a) of SFAS 133. Provide us with your analysis using the conditions outlined in paragraphs 12 to 32 of EITF 00-19 to determine

whether the warrants should be classified in equity or as a liability. Specifically, we note from your disclosures on page 25 that the warrants have registration rights. Do they also contain liquidated damages provisions? Tell us how you considered these provisions in your analysis. If the scope exception of paragraph 11(a) has not been met, tell us why you have not classified the warrants as a liability, initially measured at fair value, with changes in fair value reported in earnings and disclosed in the financial statements.

Form 10-Q For the Quarterly Period Ended September 30, 2005

Note 4. Stock-Based Compensation, page 8

6. We note that you adopted SFAS 123(R) in interim period ended September 30, 2005. Please tell us your consideration for the disclosure requirements of SAB No. 107, Section H, Question 1 which includes all disclosures required by paragraphs A240-242 of Statement 123R. If you determine that you have not provided the required disclosures of this bulletin, tell us how you intend to comply with this bulletin.

7. We note that the Company's valuation included volatility assumptions of 85% and 42% for the stock option plans and purchase plans, respectively. You indicate that the expected volatility is based on the historical volatility of the Company's common stock over the period commensurate with or longer than the expected life of the options. Please explain the significant decrease in the volatility assumption for the employee stock purchase plan from 100% for both the fiscal year 2005 and the quarter ended September 30, 2004 to 42% for the three months ended September 30, 2005 and December 31, 2005. Similarly, please explain the change in the volatility estimates for the stock option plans from 100% for fiscal 2005 to 85% for the three months ended September 30, 2005 and December 31, 2005.

Forms 8-K filed September 13, 2005, November 8, 2005 and February 2, 2006

8. We note your use of non-GAAP measures under Item 9.01 of the Form 8-Ks noted above which excludes a number of recurring items. Tell us how you considered Question 8 of Frequently Asked Questions Regarding the Use of Non-GAAP Financial Measures to include the following disclosures:

- * the manner in which management uses the non-GAAP measure to conduct or evaluate its business;
- * the economic substance behind management's decision to use such a measure;
- * the material limitations associated with use of the non-GAAP financial measure as compared to the use of the most directly comparable GAAP financial measure;
- * the manner in which management compensates for these limitations when using the non-GAAP financial measure; and
- * the substantive reasons why management believes the non-GAAP financial measure provides useful information to investors.

In this regard, we believe you should further enhance your disclosures to comply with Item 10(e)(1)(i)(C) and (D) of Regulation S-K and Question 8 of the related FAQ to demonstrate the usefulness of your non-GAAP financial measures which excludes a number of recurring items, especially since these measures appear to be used to evaluate performance. Your current disclosures regarding the

reasons for presenting these non-GAAP measures appear overly broad considering that companies and investors may differ as to which items warrant adjustment and what constitutes operating performance. Additionally, it is unclear why certain excluded items should not be considered in assessing your performance as several appear to be recurring and integral to your performance. For example, it is unclear to us why amortization of intangible assets is not relevant for investors considering that the use of these assets contributes to generating revenue. Similarly, it is unclear why excluding stock-based compensation is appropriate considering that offering your employees equity instruments appears to be a key incentive offered in the achievement of your goals as an organization.

9. We note your use of the term "pro forma information" in your Form 8-Ks. Please note that it is not appropriate for you to use this term in your Form 8-Ks since you have not used that term as contemplated in Regulation S-X. It appears such disclosures should be referred to as non-GAAP measures. Refer to footnote 12 to the Final Rules for the Conditions for Use of Non-GAAP Financial Measures.

* * * * *

As appropriate, please amend your filing and 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. You may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter with any amendment that keys your responses 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 responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in 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 Patrick Gilmore at (202)-551-3406 or the

undersigned at (202) 551-3499 if you have any questions regarding comments on the financial statements and related matters.

Sincerely,

Kathleen Collins
Accounting Branch Chief

??

??

??

??

Mr. Mark Fusco
Aspen Technology, Inc.
February 28, 2006
Page 1