



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

September 28, 2007

Mr. Michael A. Sicuro
Chief Financial Officer
Asyst Technologies, Inc.
46897 Bayside Parkway
Fremont, CA 94538

**Re: Asyst Technologies, Inc.
Form 10-K as of March 31, 2007
File No. 000-22430**

Dear Mr. Sicuro:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents 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 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 as of March 31, 2007

Selected Consolidated Financial Data, page 25

1. Please tell us what you mean when you indicate that Selected Financial Data for the fiscal years ended 2003 and 2004 is unaudited. We presume that the data for 2003 and 2004 was derived from audited financial statements not presented in the Form 10-K.

Financial Statements

Note 2, Accounting Policies, page 53

Revenue Recognition, page 55

2. In future filings please expand the policy statement to clarify the nature of and accounting practices for the balance sheet item "Deferred margin." In that regard, clarify the accounting for both revenues and costs of revenues for transactions reflected in the referenced account. Please show us what you intend to disclose.
3. In future filings please expand the second paragraph to specifically identify the types of projects for which you apply percentage of completion accounting.

Note 6, Asset Impairment Charges, page 64

4. In future filings please clarify how you accounted for the reclassification of the AJI facility to held and used.

Form 8-K dated August 2, 2007

5. We note that you present non-GAAP measures in the form of condensed consolidated statements of operations. This format may be confusing to investors as it presents various non-GAAP captions and sub-totals which have not been individually described to investors. It is not clear whether management uses each of these non-GAAP measures; and, they maybe shown here primarily as a result of the presentation format. Under Instruction 2 to Item 2.02 of Form 8-K when furnishing information under this Item you must provide all of the disclosures required by S-K Item 10(e)(1)(i), including a reconciliation to the directly comparable GAAP measure for *each* non-GAAP measure presented with accompanying explanation about why you believe *each* non-GAAP measure provides useful information to investors.

- To eliminate investor confusion, please remove the non-GAAP condensed consolidated statements of operations from future earnings releases and instead disclose only those non-GAAP measures used by management that you wish to highlight for investors, with the appropriate reconciliations.
- Please note that in the event that your Form 8-K is incorporated by reference into a 1933 Act registration statement, we may have additional questions relating to the appropriateness of this information being included in a document filed with, and not just furnished to, the Commission.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses 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 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.

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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 me at (202) 551-3605 or Brian Cascio, Branch Chief, at (202) 551-3676 if you have questions regarding these comments. Please do not hesitate to contact Martin James, Senior Assistant Chief Accountant at (202) 551-3671 with any other questions.

Sincerely,

Gary Todd
Review Accountant