

Mail Stop 4561

February 5, 2007

Geoffrey S. M. Hedrick  
Chief Executive Officer  
Innovative Solutions and Support, Inc.  
720 Pennsylvania Drive  
Exton, Pennsylvania 19341

**Re: Innovative Solutions and Support, Inc.  
Form 10-K for Fiscal Year Ended September 30, 2006  
File No. 000-31157**

Dear Mr. Hedrick:

We have reviewed the above referenced filings and have the following comments. 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 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 on 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 Fiscal Year Ended September 30, 2006

Management's Discussion and Analysis of Financial Condition and Results of Operations  
Results of Operations

Liquidity and Capital Resources, page 22

1. Clarify for us the nature of the significant increase in inventories at September 31, 2006. Tell us what portion of your inventory relates to air data products associated with the FAA's RVSM mandate. If material, clarify for us, how the Company determined that no adjustment was needed to write-down these amounts to reflect potential obsolescence, excess quantities and declines in market value

given the fact that peak demand associated with this mandate has now been accommodated.

Consolidated Statements of Operations, page 31

2. We note that the Company enters into multiple element arrangements that include product sales and non-recurring engineering services. Tell us how you considered presenting separate line items for revenue earned from the sale of your products and services, as well as cost of revenue, in your consolidated statements of operations. Refer to Rule 5-03(b)(1) and (2) of Regulation S-X.

Note 3. Summary of Significant Accounting Policies

Revenue Recognition

3. We note your disclosures on page 24 where you indicate that for multiple element arrangements, the Company allocates revenue to each deliverable based on fair value that is “established with the customer during contract negotiations.” Tell us how you considered paragraph 9 of EITF 00-21 in determining that such arrangements include multiple deliverables. Also, tell us how you considered paragraph 16 of EITF 00-21 which states, contractually stated prices in an arrangement with multiple deliverables should not be presumed to be representative of fair value. In this regard, explain how your determination of fair values based on customer negotiations complies with this guidance. Furthermore, tell us when you recognize revenue for each element and explain your revenue recognition policy for multiple element arrangements if fair value of all elements does not exist.
4. We note your disclosures on page 24 and your reference to EITF 03-5. Do the Company’s products include software that is more than incidental to the products? If so, please explain how your accounting for such product sales complies with EITF 03-5 and SOP 97-2. If not, then please explain the reference to this guidance in your disclosures.

Note 8. Notes Payable, page 42

5. Clarify for us why the current and long-term portion of the notes payable to Chester County, Pennsylvania Industrial Development Authority have not changed since inception of the loan. Tell us how the Company has determined the current and long-term portion at September 30, 2006, and 2005, respectively and the 5-year schedule of maturities included in note 8 to the audited financial statements. Tell us whether there have been any amendments to the loan that have effected the Company’s repayment requirement.

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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. 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.

Geoffrey S. M. Hedrick  
Innovative Solutions and Support, Inc.  
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You may contact Megan Akst, Staff Accountant, at (202) 551-3407 or me at (202) 551-3499 if you have questions regarding comments on the financial statements and related matters.

Very truly yours,

Kathleen Collins  
Branch Chief