



DIVISION OF
CORPORATION FINANCE

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

January 24, 2011

Mr. Harvey Kaye
Chief Executive Officer
Latitude Solutions, Inc.
190 Spanish River Blvd., Suite 101
Boca Raton, FL 33431

**Re: Latitude Solutions, Inc.
Form 10
Filed November 12, 2010
File No. 000-54194**

Dear Mr. Kaye:

We have reviewed the amendment to your registration statement filed January 14, 2011 and have the following comments. Except where indicated, please revise your registration statement so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Item 1. Business, pages 4 and 5

1. We note your response to comment seven in our letter dated December 8, 2010, but are uncertain why you have deleted the disclosure that was the subject of the comment. Please advise or revise.
2. On pages four and five we note your discussion of agreements you recently entered into with the Laurino Group, Bell Mobility, Inc. and Crucible Enterprises, Ltd., in addition to a marketing strategic alliance with General Dynamics. Please revise your disclosure, where appropriate, to provide additional information about the material terms of these agreements. As appropriate, please file these agreements as exhibits pursuant to Item 601 of Regulation S-K.

Government Regulation, page 9

3. We note your response to comment 14 in our letter dated December 8, 2010 including amending your disclosure to be consistent with Trinity Solutions business plan. We note, however, that on page four you state that Trinity Solutions was designed to identify the opportunities available for federal and state contracts and other government business opportunities. Please address potential government regulation by state and local authorities.

Summary Compensation Table, page 32

4. Please revise your disclosure to include executive compensation for the fiscal year ended December 31, 2010. Please refer to Item 402(n) of Regulation S-K. Likewise, please revise to update your director compensation on page 34. Please refer to Item 402(r) of Regulation S-K.
5. We note your response to comment 29 in our letter dated December 8, 2010. Please revise your disclosure to reconcile the payment sums of \$22,500 and \$39,865.98 Canadian to reach the disclosed total payment to Jan Rowinski of \$59,176. For example, explain your method of currency conversion.
6. Please amend your disclosure, where appropriate, to clearly indicate whether amounts are presented in U.S. dollars or other currency. For example, please indicate by footnote any conversion into U.S. dollars.

Consolidated Financial Statements for the years ended December 31, 2009 and 2008

Note 4 – Equity Investment, page F-14

7. We note your response to prior comment 38. Please tell us the quoted market price that existed for the common shares of the Company prior to the closing of the 50% ownership acquisition in July 2009. Explain to us the reasons for the difference in this price per share and the price that you used when valuing the shares issued in the acquisition.
8. We note your response to prior comment 38. Please tell us how the third party investor determined the \$.20 per share price. For example, tell us the methodology, assumptions and estimates used and the time frame of the private placement.

Consolidated Financial Statements for the periods ended September 30, 2010 and 2009

Note 4 – Equity Investment, page F-33

Mr. Harvey Kaye
Latitude Solutions, Inc.
January 24, 2011
Page 3

9. Please explain to us why the financial information of GPS Latitude for the most recent fiscal year is unaudited.

10. As GPS Latitude is a significant equity method investee, please provide summarized interim income statement information as required by Regulation S-X 8-03(b)(3).

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written 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.

You may contact Joseph Cascarano, Staff Accountant, at (202) 551-3376 or Robert Littlepage, Accountant Branch Chief, at (202) 551-3361 if you have questions regarding comments on the financial statements and related matters. Please contact Kate Beukenkamp, Staff Attorney, at (202) 551-6971 or Paul Fischer, Attorney-Advisor, at (202) 551-3415 with any other questions.

Sincerely,

s/ Paul Fischer

Larry Spirgel
Assistant Director

cc: Via facsimile to (303) 431-1567
Michael A. Littman, Esq.