



DIVISION OF  
CORPORATION FINANCE

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

October 24, 2011

Via E-mail

Avner Gal  
Chief Executive Officer  
Integrity Applications Inc.  
P.O. Box 432  
Ashkelon 78100, Israel

**Re: Integrity Applications, Inc.  
Amendment No. 1 to Registration Statement on Form S-1  
Filed October 7, 2011  
File No. 333-176415**

Dear Mr. Gal:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Fee Table

1. We note your response to prior comment 1 and the use of the phrase "any other public market." It is unclear why you cannot simply state that your stock will be offered at a fixed price until quoted on the OTC Bulletin Board, given the disclosure on the prospectus cover page that you intend to have your stock listed on the OTCBB. Please advise or revise throughout your document.

Summary, page 2

2. We note your response to prior comment 4. Please revise the opening paragraph to disclose your losses for the most recently completed fiscal year and applicable stub period.

3. We note your response to prior comment 4. Please disclose the nature of the modifications contemplated and further disclose, if true, that you cannot be sure that the proposed modifications will improve your device's results.
4. Regarding your response to prior comment 5, please further revise your document to avoid reliance on defined terms. We note, for example and without limitation, your frequent use of defined terms on pages 47 and 48. You also appear to define terms whose meaning is clear from their context, such as Securities and Exchange Commission. Refer to sample comment 3 in Staff Legal Bulletin No. 7 (June 7, 1999) for guidance.

Risk Factors, page 7

A former stockholder..., page 7

5. We note your response to prior comment 7. Please update the disclosure to reflect any developments as a result of the October 11, 2011 hearing, including any relief specified, now that an arbitrator has been appointed.

Capitalization, page 26

6. Please tell us why your pro forma capitalization at June 30, 2011 is less than your historical capitalization on the same date. We note the pro forma capitalization reflects the sale by you of 269,680 shares of common stock in private placements since June 30, 2011.

Liquidity and Capital Resources, page 32

7. Please revise to clarify how interest on the shareholder loans will be calculated.

Business, page 33

Overview, page 33

8. We note your response to prior comment 10; however, your disclosure in this section is unclear as to what developments took place in the last three years. For example, in the third paragraph, you refer to the year that you were founded and then generally discuss the developments since that date without indicating when they took place. We therefore reissue our comment.

The Product, page 36

9. We reissue the part of prior comment 18 relating to the purchase price as a barrier to adoption because it is not addressed in your response.

10. Please clarify your disclosure in response to prior comment 21 to indicate who recalibrates your products. Also, to the extent that the product must be recalibrated monthly by the user through the use of an invasive device, disclose how this compares to the recalibration requirements of competing products and revise your disclosure to clearly state, if true, that your product must be used in conjunction with an invasive device.

Regulation of the Design, Manufacture and Distribution.... page 47

11. We note your response to prior comment 22. Given that you disclose an intention to market your product in countries that do not rely on the CE Mark, please expand your disclosure to identify these markets and discuss the regulatory hurdles you will encounter.

Principal and Selling Stockholders, page 55

12. We note your response to prior comment 28. Please provide your analysis as to the impact of the tax ruling by the Israeli Tax Authorities on your selling shareholders' ability to sell shares pursuant to this registration statement. We note, for instance, the two-year restriction discussed elsewhere in the prospectus.
13. We also note that your response to prior comment 28 states that two selling shareholders are associated with a broker dealer. Please tell us whether these shareholders are affiliated with a broker dealer, as the term "affiliate" is defined in Rule 405 of the Securities Act.
14. Please file or tell us where you filed your material agreements related to the private placements conducted between December 16, 2010 and July 29, 2011.
15. We note your response to prior comment 29. Please revise the footnotes to clarify the natural persons with voting and dispositive power over the shares held by IRA custodians. In addition, confirm that voting and dispositive power in joint tenancy holdings is held by the persons identified in the table.

Financial Statements, page F-1

Report of Independent Registered Public Accounting Firm, page F-3

16. We note that your auditors changed the date of their opinion regarding your financial statements for the years ended December 31, 2009 and 2010. However, there is no indication in the filing as to the reason for the date change and there are no disclosures in the filing to indicate if any changes were made to the previous audit opinion and/or related financial statements. Please ask your auditors to explain to us why the date of their opinion was changed from August 22, 2011 to October 7, 2011 and to tell us the nature of any additional audit procedures they performed through October 7, 2011. Also,

tell us whether any other changes were made to the prior audit report dated August 22, 2011 and/or related financial statements and if so, explain the reason for such changes.

Consolidated Balance Sheets, page F-4

17. Please tell us your consideration of the guidance at ASC 915-210-45 with respect to the current description herein of your accumulated deficit.

Item 16. Exhibits, page II-3

18. Please file a complete exhibit 10.16. We note the exhibit contains references to enclosures.
19. Regarding your response to prior comment 40, please tell us which exhibit pertains to the May 2002 loan described on page 67 of your document.
20. Please file a complete exhibit 10.12. We note the exhibit contains a reference to exhibit C.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation

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Integrity Applications, Inc.  
October 24, 2011  
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of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Julie Sherman at (202) 551-3640 or Jay Webb, reviewing accountant, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein at (202) 551-3286 or Daniel Morris, Special Counsel, at (202) 551-3314 with any other questions.

Sincerely,

/s/ Daniel Morris for

Amanda Ravitz  
Assistant Director

cc (via E-mail):      Robert L. Grossman, Esq.  
                                 Greenberg Traurig, P.A.