



DIVISION OF  
CORPORATION FINANCE

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

September 16, 2011

Via E-mail

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

**Re: Integrity Applications, Inc.  
Registration Statement on Form S-1  
Filed August 22, 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 that there is currently no established market for your shares. Please provide a fixed price on the cover. In addition, please revise footnote (2) and throughout the prospectus, as appropriate, to clarify that shares will be sold at a fixed price until a market develops.

Prospectus Cover Page

2. We note that your name is the same as that of Integrity Applications, Incorporated, an engineering and software services company based in Chantilly, Virginia. To eliminate any confusion, please provide the additional disclosure required by Regulation S-K Item 501(b)(1) Instruction.

Cautionary Note Regarding Forward-Looking Statements, page 1

3. Refer to the first sentence in this section. Please remove the inapplicable references to the safe harbor provisions under the Securities and Exchange Acts.

Summary, page 2

4. Please revise the summary to describe the risks and drawbacks of your product as prominently as your disclosure about the benefits of your product. In addition, please revise to disclose the going concern limitation mentioned in the auditor's report as well as your current and cumulative losses and lack of revenues.
5. Please revise the prospectus to limit your reliance on defined terms.

Risk Factors, page 7

6. Please include a risk factor that discloses the effects on your business, including your revenues and profits, of your obligation to repay shareholder loans and royalties to OCS.

A former stockholder of Integrity Israel..., page 7

7. With a view to disclosure, please more fully describe the equitable remedies and/or monetary damages sought by Mr. Dimri. To the extent that Mr. Dimri seeks anti-dilution shares, please tell us the number of additional shares that you would be required to issue to meet his demands.

Capitalization, page 26

8. Please remove your line item for cash and cash equivalents since this is not part of your capitalization.

Management's Discussion and Analysis..., page 27

Recent Developments, page 27

9. We note your statement in the last paragraph in this section that you are required to pay royalties up to 100% of the amount of grants received. Please clarify whether you also owe interest on the grants.

Business, page 33

Overview, page 33

10. Please include disclosure regarding the development of your business for the last three years. Refer to Regulation S-K Item 101(h).
11. Please disclose the number of shares held by the stockholders you mention in the last sentence of the second paragraph.
12. Refer to the third paragraph. Please disclose what you mean by “benign effect.”
13. Please disclose what you are comparing your product against when you disclose in the last sentence of the fourth paragraph on page 34 that your product is less expensive.

Market Opportunity, page 34

14. Regarding the industry data that you cite in your document, please tell us whether you obtained the information from sources that are generally publicly available for no or nominal fee. If not, please file a consent pursuant to Rule 436 of the Securities Act of 1933. Also, please tell us how you confirmed that you have used the most current data.
15. Please provide us with independent support, including relevant articles and reports, for your statements in the prospectus regarding your market opportunity. Please mark the supporting materials so that they are tied to the disclosure.

Glucose Monitoring, page 35

16. Please identify in your document the “industry sources” that you refer to in the last sentence of the second paragraph on page 35.

The Product, page 36

17. With a view to disclosure, please tell us the basis for your statement that cost and pain are two of the most significant barriers to frequent blood monitoring.
18. Please clarify the second bullet point on page 36 to disclose the significant initial purchase price of your product when compared to a conventional monitoring system and how this may present a barrier to adoption.
19. We note that several of your trials and/or studies appear to involve a limited number of participants. We also note your second risk factor on page 10. Please balance your disclosure by describing the inherent shortcomings, if any, of relying on limited studies.

20. In the first paragraph on page 43 you disclose that trials indicate that recalibration is necessary every few months. Please reconcile this disclosure with your disclosure on page 5 where you indicate that your product will require monthly calibration.
21. Please disclose how your product is recalibrated and whether this entails a cost to the patient. To the extent that there is a recalibration cost, please confirm that this has been disclosed in Figure B on page 37.

Regulation of the Design, manufacture and Distribution of Medical Devices, page 47

22. With a view to disclosure, please tell us whether you intend to limit your sales outside the United States to countries that rely on the CE Mark.

Reimbursement, page 49

23. Please include disclosure regarding possible cuts in government spending programs, such as Medicare, due to deficit reductions efforts and its effects on your business.

Intellectual Property, page 52

24. Please disclose the duration of your significant patents.

Competition, page 53

25. Please remove the images of your competitors' products from the table marked "Figure J" on page 54. In addition, please revise this section to include descriptions of the competing technologies identified in the table.

Principal and Selling Shareholders, page 55

26. Given the nature of the transaction being registered, please advise the staff of the company's basis for determining that the transaction is appropriately characterized as a transaction that is eligible to be made on a shelf basis under Rule 415(a)(1)(i).
27. We note your disclosure in the table on page 55 that you have five executive officers and directors. Please reconcile this disclosure with your disclosure under "Management" on page 61.
28. Please tell us whether any selling shareholder is a broker-dealer or affiliated with a broker-dealer.
29. Please disclose the individuals that have voting and/or investment authority for each entity included in your tables.

Management, page 61

Directors and Executive Officers, page 61

30. Please provide the information required by Regulation S-K Item 401(e) regarding the qualifications of your directors. Also, disclose Dr. Fischell's term as a director.

Executive Compensation, page 63

Outstanding Equity Awards..., page 63

31. We note your reference to the "Options Awards" column in your summary compensation table. Please revise your table to include this disclosure.

Avner Gal, page 64

32. Please disclose the options received by Messrs. Gal and Malka in your Summary Compensation Table and in the table required by Item 402(p) or tell us why disclosure is not required.

Financial Statements, page F-1

33. Please update your financial statements as necessary to comply with the requirements of Rule 8-08 of Regulation S-X. Also, all amendments should contain a currently dated accountant's consent.

Consolidated Statements of Operations, page F-5

34. Please revise to present loss per share amounts rounded to the nearest cent in order not to imply a greater degree of precision than exists.

Consolidated Statements of Cash Flows, page F-11

35. Please tell us and revise the filing to disclose what your line item 'Linkage difference on principal of loans from stockholders' in the operating activities section of this statement represents.

Note 3 – Other Current Assets, page F-18

36. Please tell us and revise the filing to disclose the nature of the government institution assets.

Note 9 – Commitments and Contingent Liabilities, page F-20

37. We noted your discussion in Section A that approximately \$93,000 in grants are subject to repayment as of June 30, 2011. Please explain the terms upon which these amounts would be required to be repaid, explain the period through which the contingency extends through and revise to explain your accounting for the contingency.
38. We noted your discussion of the actions brought about by Mr. Dimri. If no liabilities have been recorded or if there is at least a reasonable possibility that a loss exceeding liability amounts already recognized may have been incurred with regards to Mr. Dimri's claims, please revise to either disclose an estimate (or, if true, state that the estimate is immaterial in lieu of providing quantified amounts) of the additional loss or range of loss, or state that such an estimate cannot be made. Please refer to ASC 450-20-50.

If you conclude that you cannot estimate the reasonably possible additional loss or range of loss, please supplementally: (1) explain to us the procedures you undertake on a quarterly basis to attempt to develop a range of reasonably possible loss for disclosure and (2) for each material matter, what specific factors are causing the inability to estimate and when you expect those factors to be alleviated. We recognize that there are a number of uncertainties and potential outcomes associated with loss contingencies. Nonetheless, an effort should be made to develop estimates for purposes of disclosure, including determining which of the potential outcomes are reasonably possible and what the reasonably possible range of losses would be for those reasonably possible outcomes.

Please include your proposed disclosures in your response.

Item 16. Exhibits, page II-3

39. Please file copies of the royalty agreements with the Office of the Chief Scientist.
40. Please file copies of any agreements related to your credit facilities and loans from shareholders, including the loans mentioned in the last paragraph on page 67. Also, please revise your "Liquidity and Capital Resources" discussion in Management's Discussion and Analysis to disclose the material terms of these agreements.
41. Please file the agreement with the leading chain of private diabetes clinics that you mention on page 46.

Exhibit 5.1

42. Please revise to clarify that Delaware law includes applicable provisions of the Delaware constitution and reported judicial interpretations.

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 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.