



DIVISION OF
CORPORATION FINANCE

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

April 5, 2011

Via E-mail

David A. Flynn
Chief Executive Officer and President
Fusion-io, Inc.
2855 E. Cottonwood Parkway, Suite 100
Salt Lake City, Utah 84121

**Re: Fusion-io, Inc.
Registration Statement on Form S-1
Filed on March 9, 2011
File No. 333-172683**

Dear Mr. Flynn:

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.

General

1. We will process your amendments without price ranges. Since the price range you select will affect disclosure in several sections of the filing, we will need sufficient time to process your amendments once a price range is included and the material information now appearing blank throughout the document has been provided. Please understand that the effect of the price range on disclosure throughout the document may cause us to raise issues in areas on which we have not previously commented.

Cover Page

2. It appears from disclosure on the cover page and elsewhere in the prospectus that there will be a selling shareholder component to this offering. Please confirm that, when

known, you will disclose on the cover page the amount of shares to be offered by the selling stockholders.

Prospectus Summary

Our Company, page 1

3. Please supplementally provide us with support for your claim in this section that “many users of your platform have reported achieving greater than 10 times the application throughput per server.”

Risk Factors

“We will need to achieve and maintain effective internal control over financial reporting....”
Page 18

4. Please disclose in this risk factor and in the discussion of your controls and procedures on page 49 your estimated timetable for remediation of your material weaknesses and any associated material costs.

“The terms of our loan and security agreement with a financial institution....” page 21

5. Please disclose in this risk factor that your revolving line of credit is secured by substantially all of your assets.

Market Industry and Other Data, page 27

6. We note your statement in the introductory paragraph of this section that you have not independently verified any third-party information included in the prospectus and cannot assure its accuracy or completeness. As you know, market data included in your registration statement must be based on reasonable and sound assumptions. Please revise the text as necessary so that you do not suggest that you could lack a reasonable belief as to the accuracy and completeness of the market data you elect to include in the filing.
7. Where you reference data attributed to Gartner, IMS or the TABB Group in the prospectus, please identify the specific report that was the source of such data and the date of the report. Also, please supplementally provide us with the applicable pages of all third-party reports cited in the prospectus. To expedite our review, please clearly mark each report to highlight the applicable portion or section containing the information and cross-reference it to the appropriate location in the prospectus. Also, please tell us if you commissioned any of the reports you cite.

Use of Proceeds, page 29

8. You indicate in this section that you intend to use the net proceeds from this offering, in part, to expand your sales and marketing organizations and further develop and expand your product offerings. Please disclose, to the extent known, the approximate amount of the proceeds you intend to use for each of these purposes. Refer to Item 504 of Regulation S-K.

Management's Discussion and Analysis

Overview, page 36

9. Consider expanding your overview to provide insight into material opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which your executives are most focused for both the short and long term. In this regard, consider discussing the impact that the release of new software, such as your ioSphere and directCache, is expected to have on your revenue. Also, consider discussing the challenges you face from your recent substantial growth and the expansion of your overseas operations. Please refer to Section III.A of SEC Release No. 33-8350 for further guidance.
10. We note your disclosure that during the six months ended December 31, 2010, sales to two of your OEMs accounted for 32% of your revenue. However, we note your disclosure on page F-11 that during the six months ended December 31, 2010, three customers accounted for 72% of your revenue. Tell us what consideration you gave to disclosing this concentration in your overview and discussing the implications on your business. Further, we note your disclosure that you expect revenue from Facebook, Inc. and one other end-user to account for a substantial portion of revenue for the three months ending March 31, 2011, but that revenue from these parties will decline significantly for the three months ended June 30, 2011. Tell us what consideration you gave to disclosing the amount of revenue generated from these two parties for the six months ended December 31, 2010.

Results of Operations for the Six Months Ended December 31, 2009 and 2010

Cost of Revenue and Gross Margin, page 38

11. We note your disclosure that gross margin decreased due to a higher concentration of lower gross margin sales to one significant customer and your OEM customers. Please clarify whether the lower margin sales relate to different products or volume discounts.

Certain Critical Accounting Policies and Estimates

Revenue Recognition, page 50

12. We note your disclosure that you recognize revenue net of estimated returns and pricing adjustments, and we note your disclosure on page F-9 that you provide allowances for rebates and discounts based on programs in existence at the time revenue is recognized. Consider expanding this disclosure to more specifically describe the programs in place, how you develop estimates, the accuracy of past estimates and any reasonably likely uncertainties. Refer to Section V of SEC Release No. 33-8350.

Stock Based Compensation

Fair Value of Our Common Stock, page 53

13. Tell us whether your contemporaneous valuations of your common stock were performed by an unrelated valuation specialist, as defined by the AICPA Practice Aid “Valuation of Privately-Held-Company Equity Securities Issued as Compensation” and what consideration you gave to disclosing this.
14. Reconcile and describe the differences between the sales of Convertible Preferred Stock sold during 2009 and 2010 and your fair value of ordinary shares issued during those periods.
15. Please discuss in greater detail the significant factors considered and assumptions made in determining the fair value of your underlying stock, and the significant factors contributing to the difference in the fair value determined between each grant date. As part of your response, please further explain the following:
 - Either quantitatively or qualitatively, the significance of each factor to the increase in the fair value of your ordinary shares between grant dates. That is, describe how much of the growth in fair value can be attributed to each of the factors mentioned;
 - How you considered the increases in revenue during the quarters ended December 31, 2009 and March 31, 2010 in determining the fair value of your stock for your February 2010 and March 2010 grants;
 - Your consideration to the results of the May 21, 2010 valuation for your 2010 grants given the proximity to this date as compared to the March 2009 valuation; and
 - The factors that you considered in determining to use the same discount rate for the May 21, 2010, October 8, 2010 and December 31, 2010 valuations.

16. When your estimated IPO price is known and included in your registration statement, please revise your disclosure to include a discussion of each significant factor contributing to the difference between the fair value of the underlying stock as determined for your most recent equity awards and your IPO offering range. The disclosure should fully describe the assumptions utilized at the IPO valuation date that are significantly different than those used in the most recent valuation.

Inventory Valuation, page 57

17. We note your disclosure on page 37 that although you have experienced significant percentage growth in your revenue, you do not believe that your historical growth rates are likely to be sustainable or indicative of future growth. We further note that your inventory balance has increased significantly from June 30, 2010 to December 31, 2010, and represents 68% of total assets as of December 31, 2010. Please tell us what consideration you gave to disclosing your backlog of funded and unfunded firm contracts, projects and purchase orders in order to provide investors with quantitative insight as to management's expectations as to future revenue pursuant to Item 101(c)(1)(viii) of Regulation S-K. Please also provide further discussion regarding the specific risks associated with the realizability of your inventory and the likelihood as to whether additional charges may be required. As part of your discussion, include the inventory turnover rates for each period presented and provide a discussion of the factors impacting material differences between reporting periods. Also, disclose the adjustments you have recorded in the past relating to excess and obsolete inventory.
18. We note your disclosure that the number of evaluation units has increased due to the overall growth and an increase in your customer base. Tell us what consideration you have to disclosing the dollar value of your evaluation units as of December 31, 2010, the accounting policies you follow for these units, and the adjustments you have recorded in the past for write downs relating to these units.

Business

Case Studies, page 65

19. Please supplementally advise us of the names of the customers discussed in the case studies in this section and tell us whether these customers have reviewed the corresponding disclosure. Also, tell us what consideration you gave to disclosing in the prospectus the names of these customers. In this regard, we note you disclose the identity of customers in some of the case studies included on your website. Finally, please disclose the approximate date that each customer adopted your solution.

Customers, page 70

20. You disclose that Facebook, IBM and HP each accounted for more than 10% of your revenues in fiscal 2010. Please clarify the actual percentage of your revenues that each customer accounted for in fiscal 2010 and the first six months of fiscal 2011. Also, we note your disclosure that you generally sell pursuant to individual purchase orders. Please tell us if you have master agreements with any of your three top customers that govern your relationships. If so, tell us what consideration you gave to discussing the material terms of these agreements in your prospectus and filing the agreements as exhibits. Refer to Item 601(b)(10)(ii)(B) of Regulation S-K.

Intellectual Property, page 72

21. You disclose in this section that you currently have three 3 issued patents. If you are materially dependent upon any of these patents, please disclose that fact and the duration of the patent. Refer to Item 101(c)(1)(iv) of Regulation S-K.

Executive Compensation

Incentive Cash Compensation, page 83

22. It appears that you may be relying on Instruction 4 to Item 402(b) of Regulation S-K as the basis for not disclosing the specific performance targets in Mr. Dawson's sales commission plan. Accordingly, please disclose how difficult it would be for Mr. Dawson or how likely it will be for you to achieve the undisclosed target levels or other factors. Refer to Instruction 4 to Item 402(b) of Regulation S-K. Please note that general statements regarding the level of difficulty or ease associated with achieving performance goals are not sufficient. In discussing how difficult it will be for Mr. Dawson or how likely it will be for you to achieve the target levels or other factors, please provide as much detail as necessary without providing information that would result in competitive harm.

Employment Agreements and Offer Letters, page 90

23. Please file your offer letters with Messrs. Wolf, Dawson, and Smith as Exhibits to your registration statement. Refer to Item 601(b)(10)(iii)(A) of Regulation S-K.

Agreements Providing for Severance or Change of Control Benefits, page 92

24. We note that you have filed a form of your involuntary termination severance agreement with certain of your executive officers as Exhibit 10.10. Please provide us with your analysis as to why this agreement should not be considered a "management contract," executed versions of which should be filed separately for each executive officer. Refer to Instruction 1 to paragraph (b)(10) of Item 601 of Regulation S-K.

Principal and Selling Stockholders, page 108

25. When you have identified the selling stockholders, please disclose whether any are broker-dealers or affiliates of broker-dealers. If any are registered broker-dealers who acquired their shares as investments, rather than as transaction-based compensation for the performance of investment banking or similar services, they should be named as underwriters. With respect to any affiliates of registered broker-dealers, you should indicate whether they acquired the securities to be resold in the ordinary course of business. Also indicate whether at the time of the acquisition they had any agreements, understandings or arrangements with any other persons, either directly or indirectly, to dispose of the securities.
26. Footnotes 6, 8, 9, 12 and 13 disclaim beneficial ownership except to the extent of pecuniary interest. Please note that beneficial ownership is not determined based on pecuniary interest. Refer to Exchange Act Rule 13d-3(a). Please revise.

Shares Eligible for Future Sale

Lock-Up Agreements, page 116

27. Please file the lock-up agreements as exhibits to the registration statement.

Consolidated Financial Statements

Consolidated Statements of Convertible Preferred Stock, page F-5

28. We note that the Company repurchased 542,961 shares of Series B convertible preferred shares during the year ended June 30, 2010 for \$1,834,000. We further note your disclosure on page F-25 that these shares were issued at \$2.00 per share. Tell us how you have accounted for the excess of fair value to repurchase the shares over the carrying amount of the preferred stock, with reference to the authoritative literature.

Notes to Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Revenue recognition, page F-8

29. We note your disclosure on page 9 that even if an OEM integrates one or more of your products into its server, data storage systems or appliance solutions, you cannot be assured that its product will be commercially successful or that you will receive any revenue as a result. Clarify whether you consider delivery to be complete upon shipment to the reseller or to the end customer and the basis for this determination.

30. We note that your agreements with certain OEMS and resellers allow for product returns and price adjustments. We also note that you state that “even if we are not contractually obligated to accept returned products, we may determine that it is in our best interest to accept returns in order to maintain good relationships with those customers (your page 10).” Please clarify your revenue recognition policies for OEMs and resellers. In this regard, clarify the terms of your sales to these parties and indicate whether such terms will be modified. Further, explain why you believe you have sufficient history to estimate returns. Your response should address ASC 605-15-25-1 to 25-4 and SAB Topic 13A4a questions 4 and 5. Also, discuss historical volumes of refunds.
31. Tell us and disclose the significant factors, inputs, assumptions, and methods used to determine selling price, whether based on vendor-specific objective evidence, third-party evidence, or estimated selling price, as required by ASC 605-25-50-2(e).
32. Tell us and disclose all the deliverables included in an arrangement. Explain why you have not identified software as a deliverable within your revenue recognition footnote. In this regard, explain why you do not describe the effects of adopting AU 2009-14. Your disclosures should clearly explain how you account for each unit of accounting, how each unit of accounting is determined, and how you allocate the arrangement fee among those units or deliverables. In addition, your disclosures should clarify the number of transactions or arrangements that are multiple element arrangements. Please explain why you believe that stand-alone product sales do not contain an implicit right to support services.

Concentrations of Credit Risk and Significant Customers and Suppliers, page F-10

33. We note that 72% of your revenue for the six months ended December 31, 2010 is generated from three customers. Please expand your disclosure to provide information that is adequate to inform investors of the general nature of the risk associated with the concentration. We refer you to ASC 275-10-50-20.

Property and Equipment, page F-18

34. We note your disclosure that in December 2010, you entered into agreements to terminate leases of certain facilities. Tell us if you recognized any liabilities as of December 31, 2010 in connection with the termination of these leases, and what consideration you gave to disclosing these liabilities. We further note your disclosure that you have leasehold improvements with a net book value of \$1,335,000 as of December 31, 2010 relating to these leases. Tell us if you considered whether these leasehold improvements were impaired as of December 31, 2010.

Subsequent Events, page F-36

35. We note your disclosure on page 54 that you granted 4,307,050 and 591,500 stock options on January 25, 2011 and February 19, 2011, respectively. Tell us what consideration you gave to disclosing these grants and the unrecognized compensation expense associated with these grants.

Item 16. Exhibits and Financial Statement Schedules, page II-4

36. Please tell us what consideration you gave to filing the agreements related to your preferred stock as exhibits to your registration statement. Refer to Items 601(b)(4) and 601(b)(10) of Regulation S-K.

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.

David A. Flynn
Fusion-io, Inc.
April 5, 2011
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You may contact Laura Veator, Staff Accountant, at (202) 551-3716 or Stephen Krikorian, Accounting Branch Chief, at (202) 551-3488 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Matthew Crispino, Staff Attorney, at (202) 551-3456 or, in his absence, to me at (202) 551-3735.

Sincerely,

/s/ Barbara C. Jacobs

Barbara C. Jacobs
Assistant Director

cc: Via E-mail
Robert G. Day, Esq
Wilson Sonsini Goodrich & Rosati