

Mail Stop 4561

November 30, 2009

Mr. John K. Kibarian  
President and Chief Executive Officer  
PDF Solutions, Inc.  
333 West San Carlos Street, Suite 700  
San Jose, CA 95110

**Re: PDF Solutions, Inc.  
Form 10-K for the Fiscal Year ended December 31, 2008  
Filed March 16, 2009  
Form 10-K/A for the Fiscal Year ended December 31, 2008  
Filed April 30, 2009  
Form 10-Q for the Quarterly Period ended September 30, 2009  
Filed November 9, 2009  
File No. 000-31311**

Dear Mr. Kibarian:

We have reviewed the above-referenced filings and have the following comments. If 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 supplemental 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 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 the Fiscal Year ended December 31, 2008

Item 1. Business

Customers, page 8

1. You disclose that Toshiba Corporation and IBM represented 18% and 16%, respectively, of your total revenue. In risk factors on pages 14 and 18 you further disclose that the loss of any one of your key customers could cause significant fluctuations in results of operations because your expenses are fixed in the short-term and it takes a long time to replace customers, due to your complex sales cycle that can take up to nine months or more to reach a signed contract. Please tell us the nature of your contractual relationship(s) with these principal customers, describing material provisions such as term and the material rights and obligations of the parties. Tell us whether performance under any single contract or series of similar contracts with either of the principal customers contributed in excess of ten percent of your revenues for the most recent year. Also, describe the consideration you gave to filing agreements with each of the principal customers as material contracts pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations

Design-to-Silicon-Yield Solutions, page 36

2. We note your disclosure that services revenue decreased \$13.5 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily a result of lower bookings, as customers have delayed purchases as a result of a slowdown in the semiconductor industry. However, in response to comment 3 from our letter dated November 1, 2007, you had indicated that the number of services contracts booked is one of your key indicators of financial performance, and as such, you would revise future filings to disclose the number of contracts booked during a reporting period. Please tell us why you have not provided this quantitative disclosure. We again refer you to SEC Release 33-8350, Sections III.B.1 and 3 which notes that you "should identify and address those key variables and other qualitative and quantitative factors which are peculiar to and necessary for an understanding and evaluation of the individual company." This comment also applies to your Form 10-Q's for the periods ended March 31, 2009, June 30, 2009 and September 30, 2009.

Costs of Design-to-Silicon-Yield Solutions, page 36

3. We note your current disclosure provides an explanation for the decrease in your cost of design-to-silicon-yield solutions on a dollar perspective. However, as a percentage of revenue, your cost of design-to-silicon-yield solutions increased in 2008 to 47% compared to 40% in 2007. Tell us how you considered providing additional disclosure to explain why your costs increased as a percentage of revenue. Similar concerns apply to your disclosures on page 23 of your Form 10-Q for the quarterly period ended September 30, 2009, where your cost of design-to-silicon-yield solutions increased to 52% of your nine months of 2009 revenue compared to 40% over the comparable prior interim period.

Form 10-K/A for the Fiscal Year ended December 31, 2008

Part III

Item 11. Executive Compensation

How our Executives' Compensation is Determined, page 7

4. You disclose that the compensation committee does not attempt to maintain a certain percentile within a peer group or otherwise rely entirely on that data to determine compensation to your named executive officers. However, Question and Answer 118.05 of the Division of Corporation Finance's Compliance and Disclosure Interpretations of Regulation S-K defines benchmarking, in the context of Item 402(b)(xiv) of Regulation S-K, as using compensation data about other companies as a reference point on which, either wholly or in part, to base, justify, or provide a framework for compensation decisions. Please clarify your process of assessing the reasonableness of compensation in which one factor is the competitive market compensation paid by other companies. If you base, justify, or provide a framework for compensation decisions, at least in part, by comparing "each element with that of other named executive officers in an appropriate market comparison group," then it appears that you should disclose the companies that comprise this peer group.

Base Salaries, page 8

5. Please disclose the reasons for increasing Mr. Hartgring's salary from \$210,000 to \$237,300 in 2008.

Performance Bonuses, page 9

6. You disclose that the Compensation Committee did not establish a performance bonus pool for 2008, thus implying that no performance bonuses were awarded in

2008. However, all named executive officers (other than the chief executive officer) received bonus awards in 2008. Please disclose the basis on which such awards were granted, together with a reasonably detailed discussion of the relationship of the bonus awards to corporate and individual performance.

Form 10-Q for the Quarterly Period ended September 30, 2009

Comparison of the Three Months Ended September 30, 2009 and 2008

7. Describe the reasons why revenue earned from gainshare performance incentives increased significantly in comparison to both the 1<sup>st</sup> and 2<sup>nd</sup> Quarters of 2009. Tell us whether you believe the 3<sup>rd</sup> Quarter increase represents a trend. Further, tell us why your discussion and analysis does not address this increase. Explain why you have not discussed the sequential growth by quarter.

Notes to Condensed Consolidated Financial Statements

7. Restructuring, page 11

8. We note that you disclose in Note 17 on page 84 of your Form 10-K for the year ended December 31, 2008, that you announced an additional restructuring plan that you expected to be completed during the three months ended March 31, 2009. However, it does not appear that you disclose this restructuring plan or provide any updates in your subsequent Form 10-Q's. Please tell us the status of this restructuring plan.

\* \* \* \* \*

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response 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 response to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment 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.

Mr. John K. Kibarian  
PDF Solutions, Inc.  
November 30, 2009  
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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.

You may contact Ryan Rohn, Staff Accountant, at (202) 551-3739 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Kevin Dougherty, Staff Attorney, at (202) 551-3271 or Mark Shuman, Legal Branch Chief, at (202) 551-3462. If you need further assistance, you may contact me at (202) 551-3730.

Sincerely,

Stephen Krikorian  
Accounting Branch Chief