



ORRICK, HERRINGTON & SUTCLIFFE LLP
1000 MARSH ROAD
MENLO PARK, CALIFORNIA 94025

tel +1-650-614-7400
fax +1-650-614-7401
WWW.ORRICK.COM

December 17, 2012

Lowell D. Ness
(650) 614-7455
lness@orrick.com

VIA FEDERAL EXPRESS & EDGAR

Barbara C. Jacobs
Assistant Director
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549

Re: PDF Solutions, Inc.
Form 10-K for the Fiscal Year ended December 31, 2011, as amended
Initially Filed March 15, 2012
File No. 000-31311

Dear Ms. Jacobs:

On behalf of our client, PDF Solutions, Inc. (the "Company"), we have set forth below, the Company's responses to the Staff's comment letter dated December 5, 2012. For the Staff's convenience, the Staff's comments are set forth in italics before each response.

General

The selected quarterly financial data called for by Item 8 of Form 10-K and your exhibit index are presented in your filing following the signature page, and are not listed in your Item 15(a) disclosure as required. In future filings, please ensure that your Item 8 disclosure includes (or properly incorporates by reference from elsewhere in the document) the disclosure required by Item 302 of Regulation S-K, and that your Item 15(a) disclosure is complete.

The Company respectfully acknowledges the Staff's comment and in future filings will ensure that Item 8 disclosure includes (or properly incorporates by reference from elsewhere in the document) the disclosure required by Item 302 of Regulation S-K and that the Company's Item 15(a) disclosure is complete.

Item 1. Business

Customers, page 7

You disclose here that Global Foundries and Samsung represented 24% and 15%, respectively, of your total revenue for fiscal year 2011, and your Form 10-Q for the quarter ended September 30, 2012 discloses that your three top customers accounted for 39%, 21% and 12%, respectively, of your total revenue for the nine months ended September 30, 2012. In risk factors on page 10 of your Form 10-K, you further disclose that the loss of any of your key customers or a decrease in their manufacturing or sales could cause significant fluctuations in your results of operations because your expenses are fixed in the short-term and it takes a long time to replace customers. Please tell us, and disclose in future filings, the nature of your contractual relationship(s) with Global Foundries and Samsung, 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 these principal customers contributed in excess of 10% of your revenues for the most recent year. In addition, please tell us what consideration you gave to filing agreements with each of these principal customers as material contracts pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K. Please also address the foregoing matters with respect to IBM, which accounted for 19% of your 2011 revenues, to the extent there have been material changes in your arrangements with IBM since your prior response letter dated December 11, 2009 relating to your Form 10-K for the fiscal year ended December 31, 2008.



Barbara C. Jacobs
December 17, 2012
Page 2

In response to the Staff's comments, the Company respectfully notes that while it continues to be true that the loss of a major customer could be significant, the Company does not believe that any of its individual customer contracts entered into in the ordinary course (including those identified in the Staff's comment) were contracts "upon which the registrant's business is substantially dependent," within the meaning of Item 601(b)(10)(ii)(B) of Regulation S-K. In particular, the Company respectfully notes that total revenue from its customers is often the result of a large number of independent contracts with each customer (exceeding nine in number contributing to 2011 revenue from one customer, in one case). For the most recent year, there was only one customer contract that represented more than 10% of the Company's revenues for such year. That contract represented 10.6% of the Company's 2011 total revenues.

In response to the Staff's request, the Company reports that its contracts with Global Foundries, IBM and Samsung provide various types of yield improvement services targeted, under each separate contract, to one or more specific phases and/or nodes for manufacturing semiconductors. This includes relatively recent multi-node contracts that the Company has entered into with two of those customers, which contracts provide a framework and pricing for services to be provided for multiple nodes, when and if so elected by the customers. In the case of one of these multi-node contracts, the specific timeframe for the services to be provided for each technology phase of a node is left open to be agreed later. The Company respectfully submits that while the Company calls its revenue "fixed fee" revenue only to distinguish it from variable "gainshare" revenue, the aggregate amount of fixed fee services are not necessarily predetermined in the contract. In fact, the fixed fee portion of one of the multi-node contracts, for example, has set pricing terms but permits the customer to specify the amount of resources to be provided quarterly over a minimum. The amount of fixed fee revenue that will be earned in each quarter or year in excess of the customer's minimum purchase requirements is speculative before the end of such quarter or year, and the Company does not depend on it for that reason. Thus, considering only the minimum purchase requirements, revenue from this contract has been and is expected to be well below 10% of the Company's total revenue each year.



Barbara C. Jacobs
December 17, 2012
Page 3

The Company confirms to the Staff that all contracts with its customers (including those identified in the Staff's comment) were entered into in the ordinary course of business and reflect the same basic provisions common to all of the Company's revenue contracts with its customers, which individually reflect and collectively form the basis of the Company's business model described in great detail throughout the Company's various disclosure documents. In determining whether to file such agreements as material contracts pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K, the Company considered the interdependency of contractual obligations of such agreements (i.e. are they linked) and the overall materiality of the committed non-cancelable fees that can be determined at the outset of the agreements, but does not consider potential gainshare performance incentives revenue under such agreements for the reasons explained below.

The Company does not include potential gainshare performance incentive amounts in its assessment due to inherent risks associated with its ability to achieve the target performance objectives, the manufacturing decisions implemented at the customer's sole discretion, and economic factors which can affect the overall manufacturing levels of the Company's customers. The Company has consistently addressed these issues in its risk factors disclosure titled "Revenue from our gainshare performance incentives is dependent on factors outside of our control, including the volume of ICs that our customers are able to sell to their customers". Accordingly, the Company views its gainshare revenue as opportunistic in nature. Further, the Company has lacked significant long-term visibility in assessing such revenue, as economic conditions have created significant volatility in the Company's customers' manufacturing volumes from period to period, creating a lack of visibility on their own behalf. As such, the Company does not believe that the gainshare component of these contracts can be used in hindsight to determine that these were contracts "upon which the registrant's business is substantially dependent," within the meaning of Item 601(b)(10)(ii)(B) of Regulation S-K.

In applying these points of consideration to the Company's agreements with Global Foundries, IBM and Samsung, the Company noted that where revenue was generated by multiple contracts, there were no interdependent performance obligations between the agreements. Additionally, in assessing the committed, non-cancelable fixed fees under each of the respective agreements with Global Foundries, IBM and Samsung, when such agreements were signed, the Company did not expect that such fees under such agreements would be greater than 10% of total future revenue (and they have not been to date, except for the one contract mentioned above that was 10.6% of total revenue for 2011). Due to the fact that one of the multi-node contracts with one of these customers only contractually commits such customer to the minimum purchase requirements, the Company respectfully submits that the appropriate measure of whether it is substantially dependent on this contract is the minimum purchase requirements revenue as a percentage of total *expected* revenues for any *future* period, and not the total revenue from actual purchases in hindsight. Although in any case, the Company notes to the Staff that total fixed fee revenues under this contract at the actual purchase levels were significantly less than 10% of the Company's total revenues in 2011. With respect to the contract that represented 10.6% of 2011 revenues, the Company notes that the services to be performed under this contract spanned more than one calendar year and, as explained above, the precise timing of when the work would be performed depended on many factors outside the Company's control, including, for example, the timing of product designs from the customer. As explained in detail in the Company's filings, fixed fee revenue under most of the Company's contracts is recognized on a cost-to-cost percentage of completion method, which costs are primarily driven by the timing of when the Company's services are performed. Thus, at the time of signing this contract, the Company could not have known how much of the committed non-cancelable fees would be recognized in the year in which it was signed versus any future period. Further, at the time the Company filed its 10-K, the contributions from this contract had declined to substantially less than 10% of total revenue in each of the three most recent quarterly periods ending prior to the filing of the 10-K. As a result, the Company did not believe either at the time of entering into this contract nor thereafter, including at the time it filed its 10-K that it was "substantially dependent" upon this contract.



Barbara C. Jacobs
December 17, 2012
Page 4

As a result of the application of the above described criteria as described, the Company determined that none of its customer contracts (including those identified in the Staff's comments) needed to be filed pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K either at the time they were signed, at the time of the filing of its 10-K for 2011 or currently.

The Company further respectfully acknowledges 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.
-



Barbara C. Jacobs
December 17, 2012
Page 5

Very truly yours,

/s/ Lowell D. Ness

Lowell D. Ness
Partner

LDN/LDN

cc: John K. Kibarian