

**FORM 10-Q**

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the Quarterly Period ended March 31, 2015**

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

**Commission File Number 000-31311**

**PDF SOLUTIONS, INC.**

(Exact name of Registrant as Specified in its Charter)

**Delaware**

(State or Other Jurisdiction of  
Incorporation or Organization)

**25-1701361**

(I.R.S. Employer  
Identification No.)

**333 West San Carlos Street, Suite 1000**

**San Jose, California**

(Address of Principal Executive Offices)

**95110**

(Zip Code)

**(408) 280-7900**

(Registrant's Telephone Number, Including Area Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer       Accelerated filer       Non-accelerated filer       Smaller reporting company  
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The number of shares outstanding of the Registrant's Common Stock as of April 30, 2015 was 31,456,484.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

PDF SOLUTIONS, INC.  
 CONDENSED CONSOLIDATED BALANCE SHEETS  
 (unaudited)  
 (in thousands, except par value)

|  | March 31,<br>2015 | December 31,<br>2014 |
|--|-------------------|----------------------|
| <b>ASSETS</b>  |                   |                      |
| Current assets:  |                   |                      |
| Cash and cash equivalents  | \$ 131,880        | \$ 115,464           |
| Accounts receivable, net of allowance of \$299 and \$381, respectively   | 29,193            | 37,725               |
| Deferred tax assets - current portion  | 3,317             | 3,343                |
| Prepaid expenses and other current assets  | 2,901             | 2,888                |
| Total current assets   | 167,291           | 159,420              |
| Property and equipment, net  | 9,895             | 8,832                |
| Deferred tax assets - non-current portion  | 7,643             | 8,025                |
| Other non-current assets   | 1,448             | 1,161                |
| Total assets   | <u>\$ 186,277</u> | <u>\$ 177,438</u>    |
| <b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>  |                   |                      |
| Current liabilities:   |                   |                      |
| Accounts payable   | \$ 1,235          | \$ 803               |
| Accrued compensation and related benefits  | 3,988             | 6,112                |
| Accrued and other current liabilities  | 1,588             | 1,733                |
| Deferred revenues  | 5,265             | 3,740                |
| Total current liabilities  | 12,076            | 12,388               |
| Non-current liabilities  | 2,924             | 3,227                |
| Total liabilities  | 15,000            | 15,615               |
| Commitments and contingencies (Note 9)   |                   |                      |
| Stockholders' equity:  |                   |                      |
| Preferred stock, \$0.00015 par value, 5,000 shares authorized, no shares issued and outstanding  | —                 | —                    |
| Common stock, \$0.00015 par value, 70,000 shares authorized: shares issued 36,791 and 36,258, respectively; shares outstanding 31,449 and 31,116, respectively | 5                 | 5                    |
| Additional paid-in-capital   | 256,576           | 248,734              |
| Treasury stock at cost, 5,342 and 5,142 shares, respectively   | (37,655)          | (34,048)             |
| Accumulated deficit  | (46,220)          | (52,187)             |
| Accumulated other comprehensive income   | (1,429)           | (681)                |
| Total stockholders' equity   | 171,277           | 161,823              |
| Total liabilities and stockholders' equity   | <u>\$ 186,277</u> | <u>\$ 177,438</u>    |

*See accompanying Notes to Condensed Consolidated Financial Statements (unaudited).*

**PDF SOLUTIONS, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME**  
**(unaudited)**  
**(in thousands, except per share amounts)**

|  | <b>Three Months Ended March 31,</b> |                 |
|--|-------------------------------------|-----------------|
|  | <b>2015</b>                         | <b>2014</b>     |
| <b>Revenues:</b>                                     |                                     |                 |
| Design-to-silicon-yield solutions                    | \$ 18,152                           | \$ 14,919       |
| Gainshare performance incentives                     | 8,665                               | 12,167          |
| Total revenues                                       | <u>26,817</u>                       | <u>27,086</u>   |
| <b>Costs of Design-to-silicon-yield solutions</b>    |                                     |                 |
|  | \$ 8,804                            | 9,705           |
| Gross profit   | 18,013                              | 17,381          |
| <b>Operating expenses:</b>                           |                                     |                 |
| Research and development                             | 4,088                               | 3,596           |
| Selling, general and administrative                  | 4,456                               | 4,329           |
| Amortization of other acquired intangible assets     | —                                   | 18              |
| Restructuring charges                                | —                                   | 57              |
| Total operating expenses                             | <u>8,544</u>                        | <u>8,000</u>    |
| Income from operations                               | 9,469                               | 9,381           |
| Interest and other income (expense), net             | 51                                  | (87)            |
| Income before income taxes                           | 9,520                               | 9,294           |
| Income tax provision                                 | 3,553                               | 3,039           |
| Net income   | <u>\$ 5,967</u>                     | <u>\$ 6,255</u> |
| <b>Net income per share:</b>                         |                                     |                 |
| Basic  | <u>\$ 0.19</u>                      | <u>\$ 0.21</u>  |
| Diluted  | <u>\$ 0.18</u>                      | <u>\$ 0.20</u>  |
| <b>Weighted average common shares:</b>               |                                     |                 |
| Basic  | 31,336                              | 30,477          |
| Diluted  | <u>32,291</u>                       | <u>31,965</u>   |
| Net income   | \$ 5,967                            | \$ 6,255        |
| <b>Other comprehensive income:</b>                   |                                     |                 |
| Foreign currency translation adjustments, net of tax | (748)                               | (52)            |
| Comprehensive income                                 | <u>\$ 5,219</u>                     | <u>\$ 6,203</u> |

*See accompanying Notes to Condensed Consolidated Financial Statements (unaudited).*

**PDF SOLUTIONS, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(unaudited)**  
**(in thousands)**

|   | <b>Three Months Ended</b> |                   |
|---|---------------------------|-------------------|
|   | <b>March 31,</b>          |                   |
|   | <b>2015</b>               | <b>2014</b>       |
| <b>Operating activities:</b>  |                           |                   |
| Net income  | \$ 5,967                  | \$ 6,255          |
| Adjustments to reconcile net income to net cash provided by operating activities:                 |                           |                   |
| Depreciation and amortization   | 605                       | 458               |
| Stock-based compensation expense  | 2,199                     | 1,660             |
| Amortization of acquired intangible assets  | —                         | 18                |
| Deferred taxes  | 416                       | 1,886             |
| Loss on sale/disposal of property and equipment   | —                         | 34                |
| Purchases of treasury stock in connection with tax withholdings on restricted stock grants        | (2)                       | (8)               |
| Reversal of allowance for doubtful accounts   | (82)                      | (28)              |
| Unrealized loss on foreign currency forward contract  | 84                        | 24                |
| Tax benefit related to stock-based compensation expense   | 1,858                     | 44                |
| Excess tax benefit from stock-based compensation  | (1,754)                   | (41)              |
| Changes in operating assets and liabilities:  |                           |                   |
| Accounts receivable   | 8,615                     | 2,373             |
| Prepaid expenses and other assets   | (315)                     | (264)             |
| Accounts payable  | (988)                     | (279)             |
| Accrued compensation and related benefits   | (2,024)                   | (2,386)           |
| Accrued and other liabilities   | (415)                     | (442)             |
| Deferred revenues   | 1,455                     | 2,537             |
| Billings in excess of recognized revenues   | —                         | 248               |
| Net cash provided by operating activities   | <u>15,619</u>             | <u>12,089</u>     |
| <b>Investing activities:</b>  |                           |                   |
| Purchases of property and equipment   | (1,145)                   | (929)             |
| Net cash used in investing activities   | <u>(1,145)</u>            | <u>(929)</u>      |
| <b>Financing activities:</b>  |                           |                   |
| Proceeds from exercise of stock options   | 3,128                     | 784               |
| Proceeds from employee stock purchase plan  | 680                       | 632               |
| Excess tax benefit from stock-based compensation  | 1,754                     | 41                |
| Purchases of treasury stock   | (3,605)                   | (968)             |
| Net cash provided by financing activities   | <u>1,957</u>              | <u>489</u>        |
| Effect of exchange rate changes on cash and cash equivalents                                      | (15)                      | (26)              |
| Net change in cash and cash equivalents   | 16,416                    | 11,623            |
| Cash and cash equivalents, beginning of period  | 115,464                   | 89,371            |
| Cash and cash equivalents, end of period  | <u>\$ 131,880</u>         | <u>\$ 100,994</u> |
| <b>Supplemental disclosure of cash flow information:</b>  |                           |                   |
| Cash paid during the period for:  |                           |                   |
| Taxes   | <u>\$ 1,941</u>           | <u>\$ 1,648</u>   |
| Property and equipment received and accrued in accounts payable and accrued and other liabilities | <u>\$ 749</u>             | <u>\$ 400</u>     |

*See accompanying Notes to Condensed Consolidated Financial Statements (unaudited).*

**PDF SOLUTIONS, INC.**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)**

**1. BASIS OF PRESENTATION**

*Basis of Presentation*

The interim unaudited condensed consolidated financial statements included herein have been prepared by PDF Solutions, Inc. (“the Company”) pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”), including the instructions to the Quarterly Report on Form 10-Q and Article 10 of Regulation S-X. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted. The interim unaudited condensed consolidated financial statements reflect, in the opinion of management, all adjustments necessary (consisting only of normal recurring adjustments), to present a fair statement of results for the interim periods presented. The operating results for any interim period are not necessarily indicative of the results that may be expected for other interim periods or the full fiscal year. The accompanying interim unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto in the Company’s Annual Report on Form 10-K for the year ended December 31, 2014.

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries after the elimination of all significant intercompany balances and transactions.

The condensed consolidated balance sheet at December 31, 2014, has been derived from the audited consolidated financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America.

*Use of Estimates* — The preparation of financial statements in conformity with generally accepted accounting principles in the United States (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates in these financial statements include revenue recognition for fixed-price solution implementation service contracts, stock-based compensation expense and accounting for income taxes. Actual results could differ from those estimates.

*Revenue Recognition* — The Company derives revenue from two sources: Design-to-silicon-yield solutions and Gainshare performance incentives.

*Design-to-Silicon-Yield Solutions* — Revenue that is derived from Design-to-silicon-yield solutions comes from services and software licenses. The Company recognizes revenue of Design-to-silicon-yield solutions as follows:

The Company generates a significant portion of its Design-to-silicon-yield solutions revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require reliable estimation of costs to perform obligations and the overall scope of each engagement. Revenue under project-based contracts for solution implementation services is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on fixed-price solution implementation contracts are recognized in the period when they become probable. Revisions in profit estimates are reflected in the period in which the conditions that require the revisions become known and can be estimated. Revenue under time and materials contracts for solution implementation services are recognized as the services are performed. On occasion, the Company licenses its software products as a component of its fixed-price service contracts. In such instances, the software products are licensed to customers over a specified term of the agreement with support and maintenance to be provided at each customer’s option over the license term. The amount of product and service revenue recognized in a given period is affected by the Company’s judgment as to whether an arrangement includes multiple deliverables and, if so, the Company’s determination of the fair value of each deliverable. In general, vendor-specific objective evidence of selling price (“VSOE”) does not exist for the Company’s solution implementation services and software products and because the Company’s services and products include our unique technology, the Company is not able to determine third-party evidence of selling price (“TPE”). Therefore, in such circumstances the Company uses best estimated selling prices (“BESP”) in the allocation of arrangement consideration. In determining BESP, the Company applies significant judgment as the Company’s weighs a variety of factors, based on the facts and circumstances of the arrangement. The Company typically arrives at BESP for a product or service that is not sold separately by considering company-specific factors such as geographies, internal costs, gross margin objectives, pricing practices used to establish bundled pricing, and existing portfolio pricing and discounting. After fair value is established for each deliverable, the total transaction amount is allocated to each deliverable based upon its relative fair value. Fees allocated to solution implementation services are recognized using the cost-to-cost percentage of completion method of contract accounting. Fees allocated to software and related support and maintenance are recognized under software revenue recognition guidance. The Company defers certain pre-contract costs incurred for specific anticipated contracts. Deferred costs consist primarily of direct costs to provide solution implementation services in relation to the specific anticipated contracts. The Company recognizes such costs as a component of cost of revenues, the timing of which is dependent upon persuasive evidence of contract arrangement assuming all other revenue recognition criteria are met. At the end of reporting period, the Company evaluates its deferred costs for their probable recoverability. The Company recognizes impairment of deferred costs when it is determined that the costs no longer have future benefits and are no longer recoverable.

The Company also licenses its software products separately from its solution implementations. For software license arrangements that do not require significant modification or customization of the underlying software, software license revenue is recognized under the residual method when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, (4) collectability is probable, and (5) the arrangement does not require services that are essential to the functionality of the software. When arrangements include multiple elements such as support and maintenance, consulting (other than for its fixed price solution implementations), installation, and training, revenue is allocated to each element of a transaction based upon its fair value as determined by the Company's VSOE and such services are recorded as services revenue. VSOE for maintenance is generally established based upon negotiated renewal rates while VSOE for consulting, installation, and training services is established based upon the Company's customary pricing for such services when sold separately. Revenue for software licenses with extended payment terms is not recognized in excess of amounts due. For software license arrangements that require significant modification or customization of the underlying software, the software license revenue is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting, and such revenue is recorded as services revenue.

Gainshare Performance Incentives — When the Company enters into a contract to provide yield improvement services, the contract usually includes two components: (1) a fixed fee for performance by the Company of services delivered over a specific period of time; and (2) a Gainshare performance incentive component where the customer may pay a contingent variable fee, usually after the fixed fee period has ended. Revenue derived from Gainshare performance incentives represents profit sharing and performance incentives earned contingent upon the Company's customers reaching certain defined operational levels established in related solution implementation service contracts. Gainshare performance incentives periods are usually subsequent to the delivery of all contractual services and therefore have no cost to the Company. Due to the uncertainties surrounding attainment of such operational levels, the Company recognizes Gainshare performance incentives revenue (to the extent of completion of the related solution implementation contract) upon receipt of performance reports or other related information from the customer supporting the determination of amounts and probability of collection.

## **2. RECENT ACCOUNTING PRONOUNCEMENTS**

In May 2014, the Financial Accounting Standard Board ("FASB") issued ASU No. 2014-09, "Revenue from Contracts with Customers". The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. The updated standard will replace existing revenue recognition guidance under GAAP when it becomes effective. Early adoption is not permitted. The updated standard would be effective for the Company beginning January 1, 2017; however, in April 2015, the FASB agreed to propose a one-year deferral of the effective date. If the proposed deferral is approved, the new standard will become effective for the Company beginning January 1, 2018 and can be applied either the retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. The Company has not yet selected a transition method and is currently evaluating the impact of adopting this new accounting standard on its financial statements.

In August 2014, the FASB issued Accounting Standards Update ("ASU") No. 2014-15, "Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern". The new standard provides guidance around management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on our financial statements.

### 3. BALANCE SHEET COMPONENTS

Accounts receivable include amounts that are unbilled at the end of the period. Unbilled accounts receivable are determined on an individual contract basis and were \$9.2 million and \$9.7 million as of March 31, 2015, and December 31, 2014, respectively.

Property and equipment consists of (in thousands):

|                                   | <u>March 31,<br/>2015</u> | <u>December 31,<br/>2014</u> |
|-----------------------------------|---------------------------|------------------------------|
| Property and equipment, net:      |                           |                              |
| Computer equipment                | \$ 8,678                  | \$ 9,817                     |
| Software                          | 1,898                     | 3,369                        |
| Furniture, fixtures and equipment | 745                       | 756                          |
| Leasehold improvements            | 1,139                     | 1,127                        |
| Test equipment                    | 6,677                     | 6,401                        |
| Construction-in-progress          | 3,287                     | 2,405                        |
|                                   | <u>22,424</u>             | <u>23,875</u>                |
| Less: accumulated depreciation    | (12,529)                  | (15,043)                     |
| Total                             | <u>\$ 9,895</u>           | <u>\$ 8,832</u>              |

Depreciation and amortization expense was \$0.6 million and \$0.5 million for the three months ended March 31, 2015 and 2014, respectively.

### 4. STOCKHOLDERS' EQUITY

Stock-based compensation is estimated at the grant date based on the award's fair value and is recognized on a straight-line basis over the vesting periods, generally four years. Stock-based compensation expenses before taxes related to the Company's stock plans and employee stock purchase plan were allocated as follows (in thousands):

|   | <b>Three Months</b>    |                 |
|---|------------------------|-----------------|
|   | <b>Ended March 31,</b> |                 |
|   | <u>2015</u>            | <u>2014</u>     |
| Cost of Design-to-silicon-yield solutions | \$ 887                 | \$ 724          |
| Research and development                  | 491                    | 371             |
| Selling, general and administrative       | 821                    | 565             |
| Stock-based compensation expenses         | <u>\$ 2,199</u>        | <u>\$ 1,660</u> |

On March 31, 2015, the Company has in effect the following stock-based compensation plans:

*Stock Plans* — At the annual meeting of stockholders on November 16, 2011, the Company's stockholders approved the 2011 Stock Incentive Plan, which was first amended and restated at the 2013 annual meeting of stockholders on May 28, 2013, when the Company's stockholders approved the First Amended and Restated 2011 Stock Incentive Plan and then subsequently amended at the 2014 annual meeting of stockholders on May 27, 2014, when the Company's stockholders approved the Second Amended and Restated 2011 Incentive Plan (as amended, the "2011 Plan"). Under the 2011 Plan, the Company may award stock options, stock appreciation rights, stock grants or stock units covering shares of the Company's common stock to employees, directors, non-employee directors and contractors. The aggregate number of shares reserved for awards under this plan is 6,550,000 shares, plus up to 3,500,000 shares previously issued under the 2001 Plan that are forfeited or repurchased by the Company or shares subject to awards previously issued under the 2001 Plan that expire or that terminate without having been exercised or settled in full on or after November 16, 2011. In case of awards other than options or stock appreciation rights, the aggregate number of shares reserved under the plan will be decreased at a rate of 1.33 shares issued pursuant to such awards. The exercise price for stock options must generally be at prices no less than the fair market value at the date of grant. Stock options generally expire ten years from the date of grant and become vested and exercisable over a four-year period.

In 2001, the Company adopted a 2001 Stock Plan (the "2001 Plan"). In 2003, in connection with its acquisition of IDS Systems Inc., the Company assumed IDS' 2001 Stock Option / Stock Issuance Plan (the "IDS Plan"). Both of the 2001 and the IDS Plans expired in 2011. Stock options granted under the 2001 and IDS Plans generally expire ten years from the date of grant and become vested and exercisable over a four-year period. Although no new awards may be granted under the 2001 or IDS Plans, awards made under the 2001 and IDS Plans that are currently outstanding remain subject to the terms of each such plan.

The Company estimated the fair value of share-based awards granted under the Stock Plan during the period using the Black-Scholes-Merton option-pricing model with the following weighted average assumptions, resulting in the following weighted average fair values:

|  | <b>Three Months<br/>Ended March 31,</b> |             |
|--|---|-------------|
|  | <b>2015</b>                             | <b>2014</b> |
| Expected life (in years)   | 4.51                                    | 4.58        |
| Volatility   | 46.48%                                  | 43.35%      |
| Risk-free interest rate  | 1.25%                                   | 1.56%       |
| Expected dividend  | —                                       | —           |
| Weighted average fair value per share of options granted during the period | \$ 6.38                                 | \$ 7.75     |

As of March 31, 2015, 7.0 million shares of common stock were reserved to cover stock-based awards under the 2011 Plan, of which 4.0 million shares were available for future grant. The number of shares reserved and available under the 2011 Plan includes 0.4 million shares that were subject to awards previously made under the 2001 Plan and were forfeited, expired or repurchased by the Company after adoption of the 2011 Plan through March 31, 2015. As of March 31, 2015, there were no outstanding awards that had been granted outside of the 2011, 2001 or the IDS Plans (collectively, the "Stock Plans").

Stock option activity under the Company's Stock Plans during the three months ended March 31, 2015, was as follows:

|   | <b>Number of<br/>Options<br/>(in<br/>thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price<br/>per Share</b> | <b>Weighted<br/>Average<br/>Remaining<br/>Contractual<br/>Term<br/>(years)</b> | <b>Aggregate<br/>Intrinsic<br/>Value<br/>(in<br/>thousands)</b> |
|---|---|--|--|---|
| Outstanding, January 1, 2015                              | 2,352   | \$ 7.65  |  |   |
| Granted (weighted average fair value of \$6.38 per share) | 12  | \$ 16.12   |  |   |
| Exercised   | (462)   | \$ 6.76  |  |   |
| Canceled  | (10)  | \$ 10.41   |  |   |
| Expired   | (1)   | \$ 13.08   |  |   |
| Outstanding, March 31, 2015                               | <u>1,891</u>  | <u>\$ 7.90</u>   | <u>5.47</u>  | <u>\$ 19,032</u>  |
| Vested and expected to vest, March 31, 2015               | <u>1,874</u>  | <u>\$ 7.87</u>   | <u>5.45</u>  | <u>\$ 18,918</u>  |
| Exercisable, March 31, 2015                               | <u>1,511</u>  | <u>\$ 7.40</u>   | <u>5.00</u>  | <u>\$ 15,917</u>  |

The aggregate intrinsic value in the table above represents the total intrinsic value based on the Company's closing stock price of \$17.92 per share as of March 31, 2015. The total intrinsic value of options exercised during the three months ended March 31, 2015, was \$5.2 million.

As of March 31, 2015, there was \$1.7 million of total unrecognized compensation cost related to unvested stock options. That cost is expected to be recognized over a weighted average period of 1.3 years. The total fair value of shares vested during the three months ended March 31, 2015, was \$0.5 million.

Nonvested restricted stock units activity during the three months ended March 31, 2015, was as follows:

|                            | Shares<br>(in thousands) | Weighted<br>Average<br>Grant Date<br>Fair Value Per<br>Share |
|----------------------------|--------------------------|--|
| Nonvested, January 1, 2015 | 941                      | \$ 17.38   |
| Granted                    | 12                       | \$ 16.12   |
| Vested                     | (19)                     | \$ 17.86   |
| Forfeited                  | (18)                     | \$ 17.66   |
| Nonvested, March 31, 2015  | 916                      | \$ 17.35   |

As of March 31, 2015, there was \$12.5 million of total unrecognized compensation cost related to nonvested restricted stock units. That cost is expected to be recognized over a weighted average period of 2.4 years.

*Employee Stock Purchase Plan* — In July 2001, the Company adopted a ten-year Employee Stock Purchase Plan (as amended, “Purchase Plan”) under which eligible employees can contribute up to 10% of their compensation, as defined in the Purchase Plan, towards the purchase of shares of PDF common stock at a price of 85% of the lower of the fair market value at the beginning of the offering period or the end of the purchase period. The Purchase Plan consists of twenty-four-month offering periods with four six-month purchase periods in each offering period. Under the Purchase Plan, on January 1 of each year, the number of shares reserved for issuance will automatically increase by the lesser of (1) 675,000 shares, (2) 2% of the Company’s outstanding common stock on the last day of the immediately preceding year, or (3) the number of shares determined by the board of directors. At the annual meeting of stockholders on May 18, 2010, the Company’s stockholders approved an amendment to the Purchase Plan to extend it through May 17, 2020.

The Company estimated the fair value of purchase rights granted under the Purchase Plan during the period using the Black-Scholes-Merton option-pricing model with the following weighted average assumptions, resulting in the following weighted average fair values:

|  | Three Months<br>Ended March 31, |         |
|--|---------------------------------|---------|
|  | 2015                            | 2014    |
| Expected life (in years)   | 1.25                            | 1.25    |
| Volatility   | 54.21%                          | 34.56%  |
| Risk-free interest rate  | 0.26%                           | 0.18%   |
| Expected dividend  | —                               | —       |
| Weighted average fair value of purchase rights granted under the Purchase Plan | \$ 6.19                         | \$ 7.18 |

During the three months ended March 31, 2015 and 2014, a total of 51,000 and 52,000 shares, respectively, were issued at a weighted-average purchase price of \$13.32 and \$12.10 per share. For both the three-month periods ended March 31, 2015 and 2014, the Purchase Plan compensation expense was \$0.2 million. As of March 31, 2015, there was \$1.5 million of unrecognized compensation cost related to the Purchase Plan. That cost is expected to be recognized over a weighted average period of 1.8 years. As of March 31, 2015, 2.8 million shares were available for future issuance under the Purchase Plan.

*Stock Repurchase Program* — On October 21, 2014, the Board of Directors adopted a program, effective immediately, to repurchase up to \$25.0 million of the Company’s common stock both on the open market and in privately negotiated transactions over the next two years. During the three months ended March 31, 2015, the Company repurchased 199,912 shares under this program. As of March 31, 2015, 199,912 shares had been repurchased at an average price of \$18.03 per share under this program for a total purchase of \$3.6 million, and \$21.4 million remained available for future repurchases.

## 5. INCOME TAXES

Income tax provision increased \$0.5 million for the three months ended March 31, 2015, to \$3.5 million as compared to an income tax provision of \$3.0 million for the three months ended March 31, 2014. The Company’s effective tax rate was 37.3% and 32.7% for the three months ended March 31, 2015, and March 31, 2014, respectively. The Company’s effective tax rate increased in the three months ended March 31, 2015, as compared to the same period in 2014, primarily due to the lower reversals of certain unrecognized tax benefits upon statute of limitation lapses and unfavorable changes to New York State Tax apportionment rules. The income tax provision for the three months ended March 31, 2014 was less than the provision at the statutory rate primarily due to changes in unrecognized tax benefits.

The Company's total amount of unrecognized tax benefits, excluding interest and penalties, as of March 31, 2015, was \$10.3 million, of which \$6.1 million, if recognized, would decrease the Company's effective tax rate. The Company's total amount of unrecognized tax benefits, excluding interest and penalties, as of December 31, 2014, was \$10.4 million, of which \$6.3 million, if recognized, would affect the Company's effective tax rate. As of March 31, 2015, the Company has recorded unrecognized tax benefits of \$2.4 million, including interest and penalties, as long-term taxes payable in its condensed consolidated balance sheet. The remaining \$8.4 million has been recorded net of our deferred tax assets, of which \$4.2 million is subject to a full valuation allowance.

As of March 31, 2015, the Company believes that its deferred tax assets are "more likely than not" to be realized with the exception of California R&D tax credits that have not met the "more likely than not" realization threshold criteria because on an annual basis and pursuant to current law, the Company generates more California credits than California tax. As a result, at March 31, 2015, the excess California R&D tax credits continue to be subject to a full valuation allowance. In the event the Company concludes at a future financial reporting period that there has been a change in its ability to realize the California R&D credit deferred tax assets, and it is at such time no longer "more likely than not" that the Company will realize the tax credits before applicable expiration dates, the Company's tax provision will increase in the period in which the Company makes such determination.

The Company conducts business globally and, as a result, files numerous consolidated and separate income tax returns in the U.S. federal, various state and foreign jurisdictions. Because the Company used some of the tax attributes carried forward from previous years to tax years that are still open, statutes of limitation remain open for all tax years to the extent of the attributes carried forward into tax year 2002 for federal and California tax purposes. The Company is not subject to income tax examinations in any other of its major foreign subsidiaries' jurisdictions.

## 6. NET INCOME PER SHARE

Basic net income per share is computed by dividing net income by weighted average number of common shares outstanding for the period (excluding outstanding stock options and shares subject to repurchase). Diluted net income per share is computed using the weighted-average number of common shares outstanding for the period plus the potential effect of dilutive securities which are convertible into common shares (using the treasury stock method), except in cases in which the effect would be anti-dilutive. Under the treasury stock method, the amount that the employee must pay for exercising stock options, the amount of compensation cost for future service that the Company has not yet recognized, and the amount of the tax benefits that would be recorded in additional paid-in capital when the award becomes deductible are assumed to be used to repurchase shares. The following is a reconciliation of the numerators and denominators used in computing basic and diluted net income per share (in thousands except per share amount):

|   | <b>Three Months Ended March 31,</b> |             |
|---|-------------------------------------|-------------|
|   | <b>2015</b>                         | <b>2014</b> |
| <b>Numerator:</b>                               |                                     |             |
| Net income                                      | \$ 5,967                            | \$ 6,255    |
| <b>Denominator:</b>                             |                                     |             |
| Basic weighted-average shares outstanding       | 31,336                              | 30,477      |
| Effect of dilutive options and restricted stock | 955                                 | 1,488       |
| Diluted weighted average shares outstanding     | 32,291                              | 31,965      |
| Net income per share - Basic                    | \$ 0.19                             | \$ 0.21     |
| Net income per share - Diluted                  | \$ 0.18                             | \$ 0.20     |

The following table sets forth potential shares of common stock that are not included in the diluted net income per share calculation above because to do so would be anti-dilutive for the periods indicated (in thousands):

|                                  | <b>Three Months Ended March 31,</b> |             |
|----------------------------------|-------------------------------------|-------------|
|                                  | <b>2015</b>                         | <b>2014</b> |
| Outstanding options              | 55                                  | 19          |
| Nonvested restricted stock units | 414                                 | —           |
| Employee Stock Purchase Plan     | 264                                 | 48          |
| Total                            | <u>733</u>                          | <u>67</u>   |

## 7. CUSTOMER AND GEOGRAPHIC INFORMATION

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or group, in deciding how to allocate resources and in assessing performance.

The Company's chief operating decision maker, the chief executive officer, reviews discrete financial information presented on a consolidated basis for purposes of regularly making operating decisions and assessing financial performance. Accordingly, the Company considers itself to be in one operating segment, specifically the licensing and implementation of yield improvement solutions for companies designing and/or manufacturing integrated circuits.

The Company had revenues from individual customers in excess of 10% of total revenues as follows:

| <b>Customer</b> | <b>Three Months Ended March 31,</b> |             |
|-----------------|-------------------------------------|-------------|
|                 | <b>2015</b>                         | <b>2014</b> |
| A               | 44%                                 | 45%         |
| B               | 28%                                 | 13%         |
| C               | 11%                                 | 19%         |

The Company had gross accounts receivable from individual customers in excess of 10% of gross accounts receivable as follows:

| <b>Customer</b> | <b>March 31,<br/>2015</b> | <b>December 31,<br/>2014</b> |
|-----------------|---------------------------|------------------------------|
| A               | 40%                       | 51%                          |
| C               | 27%                       | 21%                          |

Revenues from customers by geographic area based on the location of the customers' work sites are as follows (in thousands):

|                   | <b>Three Months Ended March 31,</b> |                                       |                  |                                       |
|-------------------|-------------------------------------|---------------------------------------|------------------|---------------------------------------|
|                   | <b>2015</b>                         |                                       | <b>2014</b>      |                                       |
|                   | <b>Revenues</b>                     | <b>Percentage<br/>of<br/>Revenues</b> | <b>Revenues</b>  | <b>Percentage<br/>of<br/>Revenues</b> |
| United States     | \$ 10,315                           | 38%                                   | \$ 11,399        | 42%                                   |
| Germany           | 6,264                               | 24                                    | 9,100            | 34                                    |
| South Korea       | 6,918                               | 26                                    | 2,260            | 8                                     |
| Rest of the world | 3,320                               | 12                                    | 4,327            | 16                                    |
| Total revenue     | <u>\$ 26,817</u>                    | <u>100%</u>                           | <u>\$ 27,086</u> | <u>100%</u>                           |

Long-lived assets, net by geographic area are as follows (in thousands):

|                              | March 31,<br>2015 | December 31,<br>2014 |
|------------------------------|-------------------|----------------------|
| United States                | \$ 9,319          | \$ 8,240             |
| Rest of the world            | 576               | 592                  |
| Total long-lived assets, net | <u>\$ 9,895</u>   | <u>\$ 8,832</u>      |

## 8. FAIR VALUE MEASUREMENTS

Fair value is the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The multiple assumptions used to value financial instruments are referred to as inputs, and a hierarchy for inputs used in measuring fair value is established, that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs reflect assumptions market participants would use in pricing an asset or liability based on market data obtained from independent sources while unobservable inputs reflect a reporting entity's pricing based upon its own market assumptions. These inputs are ranked according to a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels.

Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs are quoted prices for similar assets or liabilities in an active market, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable and market-corroborated inputs which are derived principally from or corroborated by observable market data.

Level 3 - Inputs are derived from valuation techniques in which one or more significant inputs or value drivers are unobservable.

The following table represents the Company's assets measured at fair value on a recurring basis as of March 31, 2015, and the basis for that measurement (in thousands):

| Assets                    | Total            | Quoted<br>Prices<br>in<br>Active<br>Markets<br>for<br>Identical<br>Assets<br>(Level 1) | Significant<br>Other<br>Observable<br>Inputs<br>(Level 2) | Significant<br>Unobservable<br>Inputs<br>(Level 3) |
|---------------------------|------------------|--|---|--|
| Money market mutual funds | <u>\$ 26,358</u> | <u>\$ 26,358</u>   | <u>\$ —</u>   | <u>\$ —</u>  |

The following table represents the Company's assets measured at fair value on a recurring basis as of December 31, 2014, and the basis for that measurement (in thousands):

| Assets                    | Total            | Quoted<br>Prices<br>in<br>Active<br>Markets<br>for<br>Identical<br>Assets<br>(Level 1) | Significant<br>Other<br>Observable<br>Inputs<br>(Level 2) | Significant<br>Unobservable<br>Inputs<br>(Level 3) |
|---------------------------|------------------|--|---|--|
| Money market mutual funds | <u>\$ 26,356</u> | <u>\$ 26,356</u>   | <u>\$ —</u>   | <u>\$ —</u>  |

The Company enters into foreign currency forward contracts to reduce the exposure to foreign currency exchange rate fluctuations on certain foreign currency denominated monetary assets and liabilities, primarily on third-party accounts payables and intercompany balances. The primary objective of the Company's hedging program is to reduce volatility of earnings related to foreign currency exchange rate fluctuations. The counterparty to these foreign currency forward contracts is a large global financial institution that the Company believes is creditworthy, and therefore, the Company believes the credit risk of counterparty nonperformance is not significant. These foreign currency forward contracts are not designated for hedge accounting treatment. Therefore, the change in fair value of these contracts is recorded into earnings as a component of other income (expense), net, and offsets the change in fair value of the foreign currency denominated assets and liabilities, which is also recorded in other income (expense), net. For the three months ended March 31, 2015, the Company recognized a realized loss on the contracts of \$0.7 million, which was recorded in other income (expense), net in the Company's Statement of Operations and Comprehensive Income. For the three months ended March 31, 2014, the Company did not have gain/loss on foreign currency forward contracts.

The Company carries these derivatives financial instruments on its Consolidated Balance Sheets at their fair values. The Company's foreign currency forward contracts are classified as Level 2 because it is not actively traded and the valuation inputs are based on quoted prices and market observable data of similar instruments. As of March 31, 2015, the Company had one outstanding forward contract with a notional amount of \$6.5 million and recorded \$134,000 other current liabilities associated with this outstanding forward contract.

## 9. COMMITMENTS AND CONTINGENCIES

### *Leases*

The Company leases administrative and sales offices and certain equipment under noncancelable operating leases, which contain various renewal options and, in some cases, require payment of common area costs, taxes and utilities. These operating leases expire at various times through 2019. Rent expense was \$0.5 million for each of the three months ended March 31, 2015 and 2014.

Future minimum lease payments under noncancelable operating leases at March 31, 2015, are as follows (in thousands):

| <b>Year Ending December 31,</b>            | <b>Amount</b>   |
|--|-----------------|
| 2015 (remaining nine months)               | \$ 1,382        |
| 2016                                       | 1,753           |
| 2017                                       | 1,415           |
| 2018                                       | 806             |
| 2019                                       | 71              |
| Thereafter                                 | 79              |
| <b>Total future minimum lease payments</b> | <b>\$ 5,506</b> |

*Litigation* — From time to time, the Company is subject to various claims and legal proceedings that arise in the ordinary course of business. The Company accrues for losses related to litigation when a potential loss is probable and the loss can be reasonably estimated in accordance with FASB requirements. During the reported period, the Company was not party to any material legal proceedings, thus no loss was probable and no amount was accrued at March 31, 2015.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

### **Forward-Looking Statements**

The following discussion of our financial condition and results of operations contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. In some cases, you can identify forward-looking statements by terminology such as "may," "could," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," "target" or "continue," the negative effect of terms like these or other similar expressions. Any statement concerning future financial performance (including future revenues, earnings or growth rates), ongoing business strategies or prospects, and possible actions taken by us or our subsidiaries, which may be provided by us are also forward-looking statements. These forward-looking statements are only predictions. Forward-looking statements are based on current expectations and projections about future events and are inherently subject to a variety of risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from those anticipated or projected. All forward-looking statements included in this document are based on information available to us on the date of filing and we further caution investors that our business and financial performance are subject to substantial risks and uncertainties. We assume no obligation to update any such forward-looking statements. In evaluating these statements, you should specifically consider various factors, including the risk factors set forth in Item 1A of this Quarterly Report on Form 10-Q. All references to "we", "us", "our", "PDF", "PDF Solutions" or "the Company" refer to PDF Solutions, Inc.

## Overview

We analyze our customers' IC design and manufacturing processes to identify, quantify, and correct the issues that cause yield loss to improve our customers' profitability by improving time-to-market, increasing yield and reducing total design and manufacturing costs. We package our solutions in various ways to meet our customers' specific business and budgetary needs, each of which provides us various revenue streams. We receive a mix of fixed fees and variable, performance-based fees for the vast majority of our yield improvement solutions. The fixed fees are typically reflective of the length of time and the resources needed to characterize a customer's manufacturing process and receive preliminary results of proposed yield improvement suggestions. The variable fee, or what we call Gainshare, usually depends on our achieving certain yield targets by a deadline. Variable fees are currently typically tied to wafer volume on the node size of the manufacturing facility where we performed the yield improvement solutions. We receive license fees and service fees for related installation, integration, training, and maintenance and support services for our software that we license on a stand-alone basis.

## Industry Trend

Consistent with the trend since 2010, we believe that the largest logic foundries will continue to increase their investment in leading edge nodes and capacity in 2015. Leading foundries continue to invest in new technologies such as multi-patterned lithography and 3-D transistor architecture, which has resulted in an increase in our business, and improved results of operations in the past few years.

The capacity utilization on 28nm, however, is expected to decline significantly from the first quarter of 2015 through the first half of 2015 according to the foundry volume leader. We believe that it could remain low through the second half of 2015 as well, which would have a negative impact on our revenues.

Generally, the demand for consumer electronics and communications devices continues to drive technological innovation in the semiconductor industry as the need for products with greater performance, lower power consumption, reduced costs and smaller size continues to grow with each new product generation. In addition, advances in computing systems and mobile devices have fueled demand for higher capacity memory chips. To meet these demands, IC manufacturers and designers are constantly challenged to improve the overall performance of their ICs by designing and manufacturing ICs with more embedded applications to create greater functionality while lowering cost per transistor. As a result, both logic and memory manufacturers have migrated to more and more advanced manufacturing nodes, capable of integrating more devices with higher performance, higher density, and lower power. As this trend continues, companies will continually be challenged to improve process capabilities to optimally produce ICs with minimal random and systematic yield loss, which is driven by the lack of compatibility between the design and its respective manufacturing process. We believe that as volume production of deep submicron ICs continues to grow, the difficulties of integrating IC designs with their respective processes and ramping new manufacturing processes will create a greater need for products and services that address the yield loss and escalating cost issues the semiconductor industry is facing today and will face in the future.

## Customer Contracts

Although a substantial portion of our total revenues are concentrated in a small number of customers, the total revenues for each of these customers in any period is the result of Design-to-silicon-yield solutions and Gainshare performance incentives revenues recognized in the period under multiple, separate contracts, with no interdependent performance obligations. These contracts were all entered into in the ordinary course of our business and contain general terms and conditions that are standard across most of our yield improvement solutions customers, including providing services typically targeted to one manufacturing process node, for example the 28 or 20 nanometer node. Fluctuations in future results may occur if any of these customers renegotiate pre-existing contractual commitments due to adverse changes in their own business or, in the case of one time and materials contract, if the customer takes advantage of contractual provisions that permit the suspension of contracted work for a period if their business experiences a financial hardship. See the additional discussion in Part I, Item 1, "Customers," on page 9 of our Annual Report on Form 10-K for the year ended December 31, 2014, and in Item 1A, "Risk Factors," on pages 24 through 30 of this Quarterly Report on Form 10-Q, for related information on the risks associated with customer concentration and Gainshare performance incentives revenue.

## Financial Highlights

Financial highlights for the three months ended March 31, 2015, were as follows:

- Total revenues for the three months ended March 31, 2015, were \$26.8 million, a decrease of \$0.3 million, or 1%, compared to \$27.1 million for the three months ended March 31, 2014. Design-to-silicon-yield solutions revenue for the three months ended March 31, 2015, was \$18.1 million, an increase of \$3.2 million, or 22%, when compared to Design-to-silicon yield solutions revenue of \$14.9 million for the three months ended March 31, 2014. The increase in Design-to-silicon yield solutions revenue was primarily the result of recognizing \$6.0 million in revenue upon signing of the two contracts with one customer during the period, as discussed above, offset by the wind down of several older engagements across multiple nodes not being fully offset yet by the ramp up of newer 20nm and 14nm engagements. Gainshare performance incentives revenue for the three months ended March 31, 2015, was \$8.7 million, a decrease of \$3.5 million, or 29%, compared to \$12.2 million for the three months ended March 31, 2014. The decrease in revenue from Gainshare performance incentives was primarily the result of lower net volumes reported at older nodes, primarily related to 32nm and 28nm engagements.
- Net income for the three months ended March 31, 2015, was \$6.0 million, compared to \$6.3 million for the three months ended March 31, 2014. The decrease in net income was primarily attributable to an increase in income tax provision of \$0.5 million, an increase in operating expense of \$0.1 million, offset by an increase in gross margin of \$0.2 million and an increase of interest and other income of \$0.1 million. The increase in income tax provision of \$0.5 million was primarily due to an increase in level of operating income and the unfavorable changes to New York State tax apportionment rules. The increase in gross margin of \$0.2 million is due to an increase in Design-to-silicon yield solutions revenue from the two contracts mentioned above that did not have corresponding expense in the direct cost of design-to-silicon yield solutions as the costs associated with these contracts were impaired during the third fiscal quarter in 2014. This increase was offset by the decrease in margin due to the mix shift between Design-to-silicon yield solutions and Gainshare performance incentive revenue.
- Net income per basic and diluted share was \$0.19 and \$0.18, respectively, for the three months ended March 31, 2015, compared to net income per basic and diluted share of \$0.21 and \$0.20, respectively, for the three months ended March 31, 2014.
- Cash and cash equivalents increased \$16.4 million from \$115.5 million at December 31, 2014, to \$131.9 million at March 31, 2015, primarily due to an increase in cash from operating and financing activities during the period, offset by a decrease in cash from investing activities.

## Critical Accounting Policies

There were no significant changes in our critical accounting policies. Please refer to Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2014. The following is a brief discussion of the more significant accounting policies and methods that we use.

### *General*

Our discussion and analysis of our financial conditions, results of operations and cash flows are based on our consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Our preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. We based our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. The most significant estimates and assumptions relate to revenue recognition, stock-based compensation and the realization of deferred tax assets. Actual amounts may differ from such estimates under different assumptions or conditions.

## ***Revenue Recognition***

We derive revenue from two sources: Design-to-silicon-yield solutions, which include services and software licenses, and Gainshare performance incentives.

**Design-to-Silicon-Yield Solutions** — Revenue that is derived from Design-to-silicon-yield solutions comes from services and software licenses. We recognize revenue for Design-to-silicon-yield solutions as follows:

We generate a significant portion of our Design-to-silicon-yield solutions revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require reliable estimation of costs to perform obligations and the overall scope of each engagement. Revenue under project-based contracts for solution implementation services is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on solution implementation contracts are recognized in the period when they become probable. Revisions in profit estimates are reflected in the period in which the conditions that require the revisions become known and can be estimated. If we do not accurately estimate the resources required or the scope of work to be performed, or do not manage the projects properly within the planned period of time or satisfy our obligations under contracts, resulting contract margins could be materially different than those anticipated when the contracts were executed. Any such reductions in contract margin could have a material negative impact on our operating results. Revenue under certain time and materials contracts for solution implementation services is recognized as the services are performed.

On occasion, we license our software products as a component of our fixed price service contracts. In such instances, the software products are licensed to customers over a specified term of the agreement with support and maintenance to be provided at each customer's option over the license term. The amount of product and service revenue recognized in a given period is affected by our judgment as to whether an arrangement includes multiple deliverables and, if so, our determination of the fair value of each deliverable. In general, vendor-specific objective evidence of selling price ("VSOE") does not exist for our solution implementation services and software products and because our services and products include our unique technology, we are not able to determine third-party evidence of selling price ("TPE"). Therefore, in such circumstances, we use best estimated selling prices ("BESP") in our allocation of arrangement consideration. In determining BESP, we apply significant judgment as we weigh a variety of factors, based on the facts and circumstances of the arrangement. We typically arrive at BESP for a product or service that is not sold separately by considering company-specific factors such as geographies, internal costs, gross margin objectives, pricing practices used to establish bundled pricing, and existing portfolio pricing and discounting. After fair value is established for each deliverable, the total transaction amount is allocated to each deliverable based upon its relative fair value. Fees allocated to solution implementation services are recognized using the cost-to-cost percentage of completion method of contract accounting. Fees allocated to software and related support and maintenance are recognized under software revenue recognition guidance.

We also license our software products separately from our solution implementation services. For software license arrangements that do not require significant modification or customization of the underlying software, software license revenue is recognized under the residual method when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, (4) collectability is probable, and (5) the arrangement does not require services that are essential to the functionality of the software. When arrangements include multiple elements such as support and maintenance, consulting (other than for our fixed price solution implementations), installation, and training, revenue is allocated to each element of a transaction based upon its fair value as determined by our VSOE and such services are recorded as services revenues. VSOE for maintenance is generally established based upon negotiated renewal rates while VSOE for consulting, installation, and training services is established based upon our customary pricing for such services when sold separately. Revenues for software licenses with extended payment terms are not recognized in excess of amounts due. For software license arrangements that require significant modification or customization of the underlying software, the software license revenues are recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting, and such revenues are recorded as services revenue. We defer certain pre-contract costs incurred for specific anticipated contracts. Deferred costs consist primarily of direct costs to provide solution implementation services in relation to the specific anticipated contracts. We recognize such costs as a component of cost of revenues, the timing of which is dependent upon the revenue recognition policy by contract. At the end of reporting period, we evaluate our deferred costs for their probable recoverability. We recognize impairment of deferred costs when it is determined that the costs no longer have future benefits and are no longer recoverable.

Gainshare Performance Incentives — When we enter into a contract to provide yield improvement services, the contract usually includes two components: (1) a fixed fee for performance by us of services delivered over a specific period of time; and (2) a Gainshare performance incentives component where the customer may pay a contingent variable fee, usually after the fixed fee period has ended. Revenues derived from Gainshare performance incentives represent profit sharing and performance incentives earned contingent upon our customers reaching certain defined operational levels established in related solution implementation service contracts. Gainshare performance incentives periods are usually subsequent to the delivery of all contractual services and therefore have no cost to us. Due to the uncertainties surrounding attainment of such operational levels, we recognize Gainshare performance incentives revenues (to the extent of completion of the related solution implementation services) upon receipt of performance reports or other related information from our customers supporting the determination of amounts and probability of collection. Gainshare performance incentives revenue is dependent on many factors which are outside our control, which can include among others, continued production of the related ICs by our customers, sustained yield improvements by our customers, and our ability to enter into new Design-to-silicon-yield solutions contracts containing provisions for Gainshare performance incentives.

### ***Stock-Based Compensation***

Stock-based compensation is estimated at the grant date based on the award's fair value and is recognized on a straight-line basis over the vesting periods, generally four years. As stock-based compensation expense recognized is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

We have elected to use the Black-Scholes-Merton option-pricing model, which incorporates various assumptions including volatility, expected life and interest rates. The expected volatility is based on the historical volatility of our common stock over the most recent period commensurate with the estimated expected life of stock options. The expected life of an award is based on historical experience and on the terms and conditions of the stock awards granted to employees. The interest rate assumption is based upon observed Treasury yield curve rates appropriate for the expected life of stock options.

### ***Income Taxes***

We are required to assess the likelihood that our deferred tax assets will be recovered from future taxable income and if we believe that they are not likely to be realizable before the expiration dates applicable to such assets then, to the extent we believe that recovery is not likely, establish a valuation allowance. Changes in the net deferred tax assets, less offsetting valuation allowance, in a period are recorded through the income tax provision in the condensed consolidated statements of operations. As of March 31, 2015, we believe that most of our deferred tax assets are "more likely than not" to be realized with the exception of California R&D tax credits that have not met the "more likely than not" realization threshold criteria because on an annual basis and pursuant to current law, we generate more California credits than California tax. As a result, at March 31, 2015, the excess California R&D tax credits continue to be subject to a full valuation allowance. See Note 5 to the condensed consolidated financial statements for further disclosures regarding our income taxes. If we conclude at a future financial reporting period that there has been a change in our ability to realize our California R&D credit deferred tax assets, and it is at such time no longer "more likely than not" that we will realize the tax credits before applicable expiration dates, our tax provision will increase in the period in which we make such determination.

Our income tax calculations are based on application of the respective U.S. federal, state or foreign tax law. Our tax filings, however, are subject to audit by the respective tax authorities. Accordingly, we recognize tax liabilities based upon our estimate of whether, and the extent to which, additional taxes will be due when such estimates are more-likely-than-not to be sustained. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. To the extent the final tax liabilities are different than the amounts originally accrued, the increases or decreases are recorded as income tax expense or benefit in the consolidated statements of operations.

### ***Recent Accounting Pronouncements and Accounting Changes***

See Note 2 of "Notes to Condensed Consolidated Financial Statements (Unaudited)" of this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements and accounting changes, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements.

## Results of Operations

The following table sets forth, for the periods indicated, the percentage of total revenues represented by the line items reflected in our condensed consolidated statements of operations:

|  | Three Months Ended March 31, |      |
|--|------------------------------|------|
|  | 2015                         | 2014 |
| Revenues:  |                              |      |
| Design-to-silicon-yield solutions                | 68%                          | 55%  |
| Gainshare performance incentives                 | 32                           | 45   |
| Total revenues                                   | 100%                         | 100% |
| Costs of Design-to-silicon-yield solutions       | 35                           | 36   |
| Gross margin                                     | 65                           | 64   |
| Operating expenses:                              |                              |      |
| Research and development                         | 15                           | 13   |
| Selling, general and administrative              | 17                           | 16   |
| Gain on sale of assets                           | (2)                          | —    |
| Amortization of other acquired intangible assets | —                            | —    |
| Restructuring charges                            | —                            | —    |
| Total operating expenses                         | 30                           | 29   |
| Income from operations                           | 35                           | 35   |
| Interest and other income (expense), net         | —                            | (1)  |
| Income before taxes                              | 35                           | 34   |
| Income tax provision                             | 13                           | 11   |
| Net income                                       | 22%                          | 23%  |

### Comparison of the Three Months Ended March 31, 2015 and 2014

| Revenues                               | Three Months Ended |           | \$       | %      |
|--|--------------------|-----------|----------|--------|
|  | March 31,          |           |          |        |
| (in thousands, except for percentages) | 2015               | 2014      | Change   | Change |
| Design-to-silicon-yield solutions      | \$ 18,152          | \$ 14,919 | \$ 3,233 | 22%    |
| Gainshare performance incentives       | 8,665              | 12,167    | (3,502)  | (29)%  |
| Total revenues                         | \$ 26,817          | \$ 27,086 | \$ (269) | (1)%   |

*Design-to-silicon-yield solutions.* Design-to-silicon-yield solutions revenue is derived from services (including solution implementations, software support and maintenance, consulting, and training) and software licenses, provided during our customer yield improvement engagements as well as during solution product sales. Design-to-silicon-yield solutions revenue increased \$3.2 million for the three months ended March 31, 2015, compared to the three months ended March 31, 2014, primarily due the result of recognizing \$6.0 million in revenue upon signing of the two contracts with one customer during the period, as discussed above, offset by the wind down of several older engagements across multiple nodes not being fully offset yet by the ramp up of newer 20nm and 14nm engagements. Our Design-to-silicon-yield solutions revenue may fluctuate in the future and is dependent on a number of factors, including the semiconductor industry's continued acceptance of our solutions, the timing of purchases by existing customers, and our ability to attract new customers and penetrate new markets including photovoltaic and LED, and further penetration of our current customer base. Fluctuations in future results may also occur if any of our significant customers renegotiate pre-existing contractual commitments due to adverse changes in their own business or, in the case of a time and materials contract, may take advantage of contractual provisions that permit the suspension of contracted work for a period if their business experiences a financial hardship.

*Gainshare Performance Incentives.* Gainshare performance incentives revenues represent profit sharing and performance incentives earned contingent upon our customers reaching certain defined operational levels. Revenue derived from Gainshare performance incentives decreased \$3.5 million for the three months ended March 31, 2015, compared to the three months ended March 31, 2014. The decrease was primarily the result of lower volumes reported at 32nm and 28nm nodes, only slightly offset by the introduction of new Gainshare revenue from a 20nm node. Our Gainshare performance incentives revenue may continue to fluctuate from period to period. Gainshare performance incentives revenue is dependent on many factors that are outside our control, including among others, continued production of ICs by our customers at facilities at which we generate gainshare, sustained yield improvements by our customers, and our ability to enter into new Design-to-silicon-yield solutions contracts containing provisions for Gainshare performance incentives.

| <b>Cost of Design-to-Silicon-Yield Solutions</b><br><b>(in thousands, except for percentages)</b> | <b>Three Months Ended March 31,</b> |             | <b>\$</b><br><b>Change</b> | <b>%</b><br><b>Change</b> |
|---|-------------------------------------|-------------|----------------------------|---------------------------|
|   | <b>2015</b>                         | <b>2014</b> |                            |                           |
| Costs of Design-to-silicon-yield solutions  | \$ 9,259                            | \$ 9,705    | \$ (446)                   | (5)%                      |

*Costs of Design-to-silicon-yield solutions.* Costs of Design-to-silicon-yield solutions consist of costs incurred to provide and support our services and costs recognized in connection with licensing our software. Services costs consist of material, employee compensation and related benefits, overhead costs, travel and facilities-related costs. Software license costs consist of costs associated with licensing third-party software sold in conjunction with our software products. Direct costs of Design-to-silicon-yield solutions for the three months ended March 31, 2015 decreased \$0.4 million compared to the three months ended March 31, 2014, primarily due to a \$1.1 million decrease in personnel-related expense due to lower headcount, partially as a result of resource realignment to research and development activities, lower variable compensation, somewhat offset by higher stock-based compensation expense, a \$0.2 million decrease in travel cost, offset by \$0.6 million increase in deferred cost, a \$0.1 million increase in subcontractor expense, a \$0.1 million increase in depreciation expense, and a \$0.1 million increase in facility expense. The direct costs of Design-to-silicon-yield solutions as a percentage of revenues during the three months ended March 31, 2015 was 35% compared to 36% in the three months ended March 31, 2014.

| <b>Research and Development</b><br><b>(in thousands, except for percentages)</b> | <b>Three Months Ended</b><br><b>March 31,</b> |             | <b>\$</b><br><b>Change</b> | <b>%</b><br><b>Change</b> |
|--|---|-------------|----------------------------|---------------------------|
|  | <b>2015</b>                                   | <b>2014</b> |                            |                           |
| Research and development   | \$ 4,088                                      | \$ 3,596    | \$ 492                     | 14%                       |

*Research and Development.* Research and development expenses consist primarily of personnel-related costs to support product development activities, including compensation and benefits, outside development services, travel and facilities cost allocations, and stock-based compensation charges. Research and development expenses increased \$0.5 million for the three months ended March 31, 2015, compared to the three months ended March 31, 2014, primarily due to a \$0.3 million increase in subcontractor expense, a \$0.1 million increase in personnel-related expense, and a \$0.1 million increase in facility expense. We anticipate our expenses in research and development will fluctuate in absolute dollars from period to period as a result of cost control initiatives and the timing of when we hire personnel as a result of the size and the timing of product development projects.

| <b>Selling, General and Administrative</b><br><b>(in thousands, except for percentages)</b> | <b>Three Months Ended</b><br><b>March 31,</b> |             | <b>\$</b><br><b>Change</b> | <b>%</b><br><b>Change</b> |
|---|---|-------------|----------------------------|---------------------------|
|   | <b>2015</b>                                   | <b>2014</b> |                            |                           |
| Selling, general and administrative   | \$ 4,456                                      | \$ 4,329    | \$ 127                     | 3%                        |

*Selling, General and Administrative.* Selling, general and administrative expenses consist primarily of compensation and benefits for sales, marketing and general and administrative personnel, legal and accounting services, marketing communications, travel and facilities cost allocations, and stock-based compensation charges. Selling, general and administrative expenses increased \$0.1 million for the three months ended March 31, 2015, compared to the three months ended March 31, 2014, primarily due to a \$0.1 million increase in travel expense, a \$0.1 million increase in subcontractor expense, offset by a \$0.1 million decrease in provision for doubtful accounts due to lower level of accounts receivable. We anticipate our selling, general and administrative expenses will fluctuate in absolute dollars from period to period as a result of cost control initiatives and to support increased selling efforts in the future.

| <b>Interest and Other Income (Expense), Net</b><br><b>(in thousands, except for percentages)</b> | <b>Three Months Ended</b><br><b>March 31,</b> |             | <b>\$</b><br><b>Change</b> | <b>%</b><br><b>Change</b> |
|--|---|-------------|----------------------------|---------------------------|
|  | <b>2015</b>                                   | <b>2014</b> |                            |                           |
| Interest and other income (expense), net   | \$ 51   | \$ (87)     | \$ 138                     | 159%                      |

*Interest and Other Income (expense), net.* Interest and other income (expense), net increased \$138,000 for the three months ended March 31, 2015 compared to the three months ended March 31, 2014. During the three months ended March 31, 2015 and 2014, interest and other income (expense) was an income of \$0.1 million and an expense of \$0.1 million, respectively, or an increase of \$0.2 million in income year over year. The change was primarily due to foreign exchange rate movements. We anticipate interest and other income (expense) will fluctuate in future periods as a result of our projected use of cash and fluctuations of foreign exchange rates.

| <b>Income Tax Provision</b><br><b>(in thousands, except for percentages)</b> | <b>Three Months Ended</b><br><b>March 31,</b> |             | <b>\$</b><br><b>Change</b> | <b>%</b><br><b>Change</b> |
|--|---|-------------|----------------------------|---------------------------|
|  | <b>2015</b>                                   | <b>2014</b> |                            |                           |
| Income tax provision   | \$ 3,553                                      | \$ 3,039    | \$ 514                     | 17%                       |

*Income Tax Provision.* Income tax provision increased \$0.5 million for the three months ended March 31, 2015, compared to three months ended March 31, 2014, primarily due to an increase in level of income and the changes of the New York State tax apportionment rules. The income tax provision for the three months ended March 31, 2014, was less than the provision at the statutory rate primarily due to changes in unrecognized tax benefits.

## **Liquidity and Capital Resources**

### **Operating Activities**

Cash flows provided by operating activities was \$15.6 million for the three months ended March 31, 2015. This resulted from net income of \$6.0 million, the addition of \$3.3 million from non-cash charges and a cash increase of \$6.3 million reflected in the net change of operating assets and liabilities. Non-cash charges consisted primarily of stock-based compensation of \$2.2 million, deferred taxes of \$0.4 million, tax benefit related to stock-based compensation plan of \$1.9 million, depreciation and amortization of \$0.6 million, partially offset by excess tax benefit from stock-based compensation of \$1.8 million. Cash flow increases resulting from the net change in operating assets and liabilities primarily consisted of \$8.6 million decrease in accounts receivable, primarily driven by strong collections, a \$1.4 million net increase in deferred revenue, offset by a \$2.0 million decrease in accrued compensation and related benefits, driven by the payment of variable compensation during the period, a \$1.0 million decrease in accounts payable due to timing of payment of third party services, a \$0.4 million decrease in accrued and other liabilities and a \$0.3 million increase in prepaid expense and other assets. The \$10.1 million combined cash flow increase resulting from the decrease in accounts receivable and the increase in deferred revenue was primarily due to the timing of billing milestones and payments received.

Cash flows provided by operating activities was \$12.1 million for the three months ended March 31, 2014. This resulted from net income of \$6.3 million, the addition of \$4.1 million from non-cash charges and a cash increase of \$1.7 million reflected in the net change of operating assets and liabilities. Non-cash charges consisted primarily of stock-based compensation of \$1.7 million, deferred taxes of \$1.9 million and depreciation and amortization of \$0.5 million. Cash flow increases resulting from the net change in operating assets and liabilities primarily consisted of a \$2.4 million decrease in accounts receivable, primarily driven by strong collections, a \$2.5 million increase in deferred revenue, a \$0.2 million increase in billing in excess of recognized revenue, offset by a \$0.3 million increase in prepaid expense and other assets, a \$0.3 million decrease in accounts payable, a \$2.4 million decrease in accrued compensation and related benefits, driven by the payment of variable compensation during the quarter, and a \$0.4 million decrease in accrued and other liabilities. The \$5.2 million combined cash flow increase resulting from the decrease in accounts receivable, the increase in deferred revenue and the increase in billings in excess of recognized revenues was primarily due to the timing of billing milestones and payments received.

### **Investing Activities**

Cash flows used in investing activities of \$1.1 million and \$0.9 million for the three months ended March 31, 2015 and 2014, respectively, consisted of payments for capital expenditures, primarily test equipment.

### **Financing Activities**

Cash flows provided by financing activities of \$2.0 million for the three months ended March 31, 2015, consisted primarily of \$3.1 million of proceeds from the exercise of stock options, \$0.7 million of proceeds from our Employee Stock Purchase Plan, \$1.8 million of excess tax benefit from stock-based compensation, offset by \$3.6 million of cash used to repurchase 199,912 shares of our common stock at an average price of \$18.03 per share.

Cash flows provided by financing activities of \$0.5 million for the three months ended March 31, 2014 consisted primarily of \$0.8 million of proceeds from the exercise of stock options, \$0.6 million of proceeds from our Employee Stock Purchase Plan, offset by \$0.9 million of cash used to purchase treasury stock.

### **Liquidity**

As of March 31, 2015, our working capital, defined as total current assets less total current liabilities, was \$155.2 million, compared with \$147.0 million as of December 31, 2014. Cash and cash equivalents were \$131.9 million as of March 31, 2015, compared to \$115.5 million as of December 31, 2014. As of March 31, 2015 and December 31, 2014, cash and cash equivalents held by our foreign subsidiaries were \$2.2 million and \$2.0 million, respectively. We anticipate that our overall expenses, as well as planned capital expenditures, may constitute a material use of our cash resources. In addition, we may use cash resources to continue to fund our R&D efforts, repurchase common stock or fund potential investments in, or acquisitions of complementary products, technologies or businesses. We believe that our existing cash resources and anticipated funds from operations will satisfy our cash requirements to fund our operating activities, capital expenditures and other obligations for at least the next twelve months.

### **Off-Balance Sheet Agreements**

We do not have any off-balance sheet arrangements, investments in special purpose entities or undisclosed borrowings or debt.

We indemnify certain customers from third-party claims of intellectual property infringement relating to the use of our products. Historically, costs related to these guarantees of indemnification have not been significant. We are unable to estimate the maximum potential impact of these guarantees on our future results of operations.

### **Contractual Obligations**

The following table summarizes our known contractual obligations (in thousands) as of March 31, 2015:

| <b>Contractual Obligations (1)</b> | <b>Payments Due by Period</b>                   |             |             |             |             |                   | <b>Total</b> |
|------------------------------------|---|-------------|-------------|-------------|-------------|-------------------|--------------|
|                                    | <b>2015<br/>(remaining<br/>nine<br/>months)</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>Thereafter</b> |              |
| Operating lease obligations        | \$ 1,382  | \$ 1,753    | \$ 1,415    | \$ 806      | \$ 71       | \$ 79             | \$ 5,506     |

(1) The contractual obligation table above excludes liabilities for uncertain tax positions of \$2.4 million, which are not practicable to assign to any particular years, due to the inherent uncertainty of the tax positions. See Note 5 of "Notes to Consolidated Financial Statements" for further discussion.

### **Item 3. Quantitative and Qualitative Disclosures About Market Risk**

The following discusses our exposure to market risk related to changes in interest rates and foreign currency exchange rates. We do not currently own any equity investments, nor do we expect to own any in the foreseeable future. This discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results could vary materially as a result of a number of factors.

*Interest Rate Risk.* As of March 31, 2015, we had cash and cash equivalents of \$131.9 million. Cash and cash equivalents consisted of cash and highly liquid money market instruments. We would not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest on our portfolio. A hypothetical increase in market interest rates of 100 basis points from the market rates in effect at March 31, 2015, would cause the fair value of these investments to decrease by an immaterial amount which would not have significantly impacted our financial position or results of operations. Declines in interest rates over time will result in lower interest income and interest expense.

*Foreign Currency and Exchange Risk.* Certain of our payables for our international offices are denominated in the local currency, including the Euro, Yen and RMB. Therefore, a portion of our operating expenditures is subject to foreign currency risks. We enter into foreign currency forward contracts to reduce the exposure to foreign currency exchange rate fluctuations on certain foreign currency denominated monetary assets and liabilities. We do not use foreign currency forward contracts for speculative or trading purposes. We record these forward contracts at fair value. The counterparty to these foreign currency forward contracts is a large global financial institution that we believe is creditworthy, and therefore, we believe the credit risk of counterparty non-performance is not significant. The change in fair value of these contracts is recorded into earnings as a component of other income (expense), net and offsets the change in fair value of foreign currency denominated monetary assets and liabilities, which is also recorded in other income (expense), net. As of March 31, 2015, we had one outstanding forward contract with a notional amount of \$6.5 million. The foreign currency exchange rate movement of plus-or-minus 10% will result in the change in fair value of this contract of plus-or-minus \$0.7 million.

### **Item 4. Controls and Procedures**

#### **Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our principal executive officer and principal financial and accounting officer, evaluated the effectiveness of our "disclosure controls and procedures" as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) as of March 31, 2015, in connection with the filing of this Quarterly Report on Form 10-Q. Based on that evaluation as of March 31, 2015, our principal executive officer and principal financial and accounting officer concluded that our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in rules and forms of the SEC and accumulated and communicated to our management as appropriate to allow timely decisions regarding required disclosure.

#### **Changes in Internal Control over Financial Reporting**

There were no changes in the Company's internal control over financial reporting during the three months ended March 31, 2015, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## **PART II — OTHER INFORMATION**

### **Item 1. Legal Proceedings**

From time to time, we are subject to various claims and legal proceedings that arise in the ordinary course of business. We accrue for losses related to litigation when a potential loss is probable and the loss can be reasonably estimated in accordance with FASB requirements. During the reported period, we were not party to any material legal proceedings, thus no loss was probable and no amount was accrued at March 31, 2015.

## Item 1A. Risk Factors

***We generate most of our revenues from a limited number of customers, and a large percentage of our revenues from a single customer, so decreased business with, or the loss of, any one of these customers, or pricing pressure, or customer consolidation could significantly reduce our revenue or margins, negatively impacting results of operations, and require us to accept lower margin business on future nodes.***

Historically, we have had a small number of large customers for our core Design-to-silicon-yield solutions and that contribute significant Gainshare performance incentives revenue, which has further concentrated in the past two years. We expect this trend to continue in the near term. In the year ended December 31, 2014, three customers accounted for 79% of our revenues, with Global Foundries representing 52%, IBM representing 16% and Samsung representing 11%. We could lose a customer due to its decision not to engage us on future process nodes, its decision to reduce the scope of our services or technology used, its decision not to develop its own future process node, or as a result of industry factors, including but not limited to consolidation. Further, new business may be delayed if a key customer uses its leverage to push for terms that are worse for us and we nonetheless continue to negotiate for better terms, in which case Solutions revenue in any particular quarter or year may fail to meet expectations. Also, the loss of any of these customers or the failure to secure new contracts with these customers could further increase our reliance on our remaining customers. For example, in September 2014, we announced that we were unable to close two solutions contracts with one of our largest customers, which restricted our ability to book revenue relating to preliminary work on these projects in that period and required us to impair previously deferred costs. Further, if any of our key customers default, declare bankruptcy or otherwise delay or fail to pay amounts owed, or we otherwise have a dispute with any of these customers, our results of operations would be negatively affected in the short term and possibly the long term. These customers may seek to renegotiate pre-existing contractual commitments due to adverse changes in their own businesses or, in some cases, take advantage of contractual provisions that permit the suspension of contracted work for some period if their business experiences a financial hardship, which would harm our operating results. In particular, these events could cause significant fluctuations in results of operations because our expenses are fixed in the short term and it takes us a long time to replace customers or reassign resources.

***Decreases in wafer volumes at our customers' manufacturing sites or the volume of ICs that some of our customers are able to sell to their customers would cause our Gainshare performance incentives revenue to suffer.***

Our Gainshare performance incentives revenue is largely determined by wafer volumes at manufacturing sites covered by our contracts and, in some cases, the volume of an IC product that our customer is able to sell to its customers. Both of these factors are outside of our control. Further, some of our manufacturing customers' business is largely dependent on customers that use our manufacturing customer as a second or third source. If those customers consolidate and/or otherwise move the orders to manufacturing facilities not covered by our contracts, or suspend their manufacturing at covered facilities for any reason, including consolidation, our Gainshare revenue will decrease. Reduced demand for semiconductor products decreases the volume of wafers and, in some cases, products our customers are able to sell, which would also directly decrease our Gainshare revenue. Also, our customers may unilaterally decide to implement changes to their manufacturing processes during the period that is covered by Gainshare, which could negatively affect yield results and our revenue. Since we currently work on a small number of large projects at a specified manufacturing sites and, in some cases, on specific IC products, our results of operations are adversely affected by negative changes at those sites or in those products. For example, if wafer orders from sites covered by our contracts are not secured by our customers, if an end product does not achieve commercial viability, if a process line or, in some cases, a specific product, do not achieve significant increases in yield or sustain significant volume manufacturing during the time we receive Gainshare, revenues associated with such volumes or products would be negatively impacted. This could significantly reduce our revenue and results of operations below expectations. In addition, if we work with two directly competitive manufacturing facilities or products, volume in one may offset volume, and thus any of our related Gainshare, in the other facility or product.

***If semiconductor designers and manufacturers do not continue to adopt, or they significantly delay adoption of, our Design-to-silicon-yield solutions, our revenues will suffer.***

If semiconductor designers and manufacturers do not continue to adopt our Design-to-silicon-yield solutions, both as currently comprised and as we may offer them in the future, our revenues will decline. We may not be successful if we do not continue to enter into agreements with existing customers and new customers that cover a larger number of IC products and processes and manufacturing facilities. If we do not continue to develop customer relationships with companies that are integrated device manufacturers ("IDMs"), fabless semiconductor companies, and foundries, as well as system manufacturers, the market acceptance of our solutions will suffer. Factors that may limit adoption of our Design-to-silicon-yield solutions by semiconductor companies include:

- our existing and potential customers' delay in their adoption of the current or next process technology;
- IDMs of logic ICs discontinuing or significantly cutting back their investment in the development of new process technology as a result of a shift to a model of outsourcing a larger proportion, or all, of the mass production of their ICs;
- our inability to keep pace with the rapidly evolving technologies and equipment used in the semiconductor design and manufacturing processes;
- our failure to achieve a satisfactory working structure and an acceptable business model between fabless customers and their foundries;
- our customers' failure to achieve satisfactory yield improvements using our Design-to-silicon-yield solutions;
- the lack of proven results with new technologies and solutions that we may develop;
- fewer processes being developed at our customers and, therefore, a reduction in the potential impact our solutions can add at any single customer; and
- our inability to develop, market, or sell effective solutions that are outside of our traditional logic focus of manufacturing process solutions.

***The semiconductor market is volatile and unpredictable and is exacerbated by economic uncertainty, which limits our ability to forecast our business and could negatively impact our results of operations.***

The semiconductor industry historically has been volatile with up cycles and down cycles, due to sudden changes in customers' manufacturing capacity requirements and spending, which depend in part on capacity utilization, demand for customers' IC products by consumers, inventory levels relative to demand, and access to affordable capital. As a result of the various factors that affect this volatility, the timing and length of any cycles can be difficult to predict. Economic uncertainty exacerbates negative trends in consumer spending and can cause some of our customers to delay or refrain altogether from entering into new engagements, licensing new or additional software products, or renewing maintenance and support for existing licensed software. Difficulties in obtaining capital and deteriorating market conditions may also lead to the inability of some customers to obtain affordable financing for other purchases, which could tie up funds otherwise budgeted for purchases of our solutions and technologies. This could negatively affect our revenues and make it challenging for us to forecast our operating results, make business decisions, and identify the risks that may affect our business, financial condition and results of operations. Customers with liquidity issues may also lead to additional bad debt expense.

***Our solution implementations may take longer than budgeted, which could cause us to lose customers and may result in adjustments to our operating results.***

Our solution implementations require a team of engineers to collaborate with our customers to address complex yield loss issues by using our software and other technologies. We must estimate the amount of resources needed to complete an existing solution implementation in order to estimate when the engineers will be able to commence a new solution implementation. In addition, our accounting for solution implementation contracts, which generate fixed fees, sometimes require adjustments to profit (loss) based on revised estimates during the performance of the contract. These adjustments may have a material effect on our results of operations in the period in which they are made. The estimates giving rise to these risks, which are inherent in fixed-price contracts, include the forecasting of costs and schedules, and contract revenues related to contract performance.

***It typically takes us a long time to enter into agreements for new engagements with our customers, to sell our unique solutions to new customers and into new markets, and that can result in uncertainty and delays in generating revenues.***

The timing and length of negotiations required to enter into agreements with our customers is difficult to predict. Further, our customers sometimes delay starting negotiations until they begin developing a new process, need to insert a new product, or experience specific yield issues. This means that on occasion we have, and may continue to begin providing technology and services under preliminary documentation before executing the final contract. In these cases, we could not recognize revenue and would defer associated costs until execution of the final contract, which, if significant, could negatively impact our results of operations in the periods before we execute the final contract. Further, if we were to incur significant effort and then fail to enter into a final contract, we would have to write-off such deferred costs in the period in which the negotiations ended, which would decrease our gross margin and could result in significant operating losses. For example, in September 2014, we announced that we were unable to close two solutions contracts with one of our largest customers, which impacted our ability to book revenue relating to preliminary work on these projects and the need to recognize previously deferred costs which caused us to miss our expectations for the third quarter of 2014. Also, some of our new products may not have proven results and our Gainshare performance incentives business model is unique and unfamiliar to new customers. Any of these factors could result in a long sales cycle. On-going negotiations and evaluation projects for new products, with new customers or in new markets may not result in significant revenues for us if we are unable to close new engagements on terms favorable to us, in a timely manner, or at all. Unexpected delays in our sales cycle could cause our revenues to fall short of expectations.

***If we are not able to attract, retain, motivate, and strategically locate talented employees, including some key executives, our business may suffer.***

Our success and competitiveness depend on our ability to attract, retain, motivate, and strategically locate in our offices around the globe, talented employees, including some of our key executives. Achieving this objective may be difficult due to many factors, including fluctuations in global economic and industry conditions, changes in our management or leadership, the hiring practices at our competitors or customers, cost reduction activities, and the effectiveness of our compensation programs, including equity-based programs. Further, we have had, and expect to continue to have, difficulty in obtaining visas permitting entry for some of our employees that are foreign nationals into the United States, and delays in obtaining visas permitting entry into other key countries, for several of our key personnel, which disrupts our ability to strategically locate our personnel. If we lose the services of any of our key executives or a significant number of our engineers, it could disrupt our ability to implement our business strategy. If we do not successfully attract, retain, and motivate key employees, including key executives, we may be unable to realize our business objectives and our operating results may suffer.

***If we do not effectively manage, support, and safeguard our worldwide information systems, and integrate recent and planned growth, our business strategy may fail.***

We have experienced in the past, and may experience in the future, interruptions in our information systems on which our global operations depend. Further, we may face attempts by others to gain unauthorized access through the Internet to our information technology systems, to intentionally hack, interfere with, or cause physical or digital damage to or failure of such systems (such as significant viruses or worms), which attempts we may be unable to prevent. We could be unaware of an incident or its magnitude and effects until after it is too late to prevent it and the damage it may cause. The theft, unauthorized use, or a cybersecurity attack that results in the publication of our trade secrets and other confidential business information as a result of such an incident could negatively affect our competitive position, the value of our investment in product or research and development, and third parties might assert against us or our customers claims related to resulting losses of confidential or proprietary information or end-user data and/or system reliability. In any such event, our business could be subject to significant disruption, and we could suffer monetary and other losses, including reputational harm. In addition, we must frequently expand our internal information system to meet increasing demand in storage, computing and communication. Our internal information system is expensive to expand and must be highly secure due to the sensitive nature of our customers' information that we transmit. Building and managing the support necessary for our growth places significant demands on our management and resources. These demands may divert these resources from the continued growth of our business and implementation of our business strategy. Further, we must adequately train our new personnel, especially our client service and technical support personnel, to effectively and accurately, respond to and support our customers. If we fail to do this, it could lead to dissatisfaction among our customers, which could slow our growth.

***Our stock price has been volatile in the past, and our earnings per share and other operating results may be unusually high in a given quarter, thereby raising investors' expectations, and then unusually low in the next quarter, thereby disappointing investors, which could cause our stock price to drop again and increase potential dilution to our stockholders.***

Our stock price has fluctuated widely during the last few years, from a low closing price of \$0.97 per share during March 2009 to recent highs, including the closing price of \$26.41 per share during January 2014. A factor in the volatility may be that our historical quarterly operating results have fluctuated. Our future quarterly operating results will likely fluctuate from time to time and may not meet the expectations of securities analysts and investors in some future period, which could cause our stock price to decrease again. A significant reduction in our stock price negatively impacts our ability to raise equity capital in the public markets and increases the cost to us, as measured by dilution to our existing shareholders, of equity financing. In addition, the reduced stock price also increases the cost to us, in terms of dilution, of using our equity for employee compensation or for acquisitions of other businesses. A greatly reduced stock price could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest, and fewer business development opportunities. Also, significant volatility in the stock price could be followed by a securities class action lawsuit, which could result in substantial costs and a diversion of our management's attention and resources.

***If we fail to protect our intellectual property rights, customers or potential competitors may be able to use our technologies to develop their own solutions which could weaken our competitive position, reduce our revenue, or increase our costs.***

Our success depends largely on the proprietary nature of our technologies. Our contractual, patent, copyright, trademark, and trade secret protection may not be effective against any particular threat or in any particular location. Our pending patent applications may not result in issued patents, and even if issued, they may not be sufficiently broad to protect our proprietary technologies. Litigation may be necessary from time to time to enforce our IP rights or to determine the validity and scope of the proprietary rights of others. As a result of any such litigation, we could lose our proprietary rights and incur substantial unexpected operating costs. Litigation could also divert our resources, including our managerial and engineering resources. If we are unable to exclude others from using our proprietary technologies and methods without compensation to us, through litigation or otherwise, it could impede our ability to grow our business and our revenues may suffer.

***Competition in the market for yield improvement solutions and increased integration between IC design and manufacturing may intensify in the future, which could impede our ability to grow or execute our strategy.***

Competition in our market may intensify in the future, which could slow our ability to grow or execute our strategy and could lead to increased pricing pressure, negatively impacting our revenues. Our current and potential customers may choose to develop their own solutions internally, particularly if we are slow in deploying our solutions or improving them to meet market needs. These and other competitors may be able to operate with a lower cost structure than our engineering organization, which would give any such competitor's products a competitive advantage over our solutions. We currently face indirect competition from the internal groups at IC companies and some direct competition from providers of yield management or prediction software such as KLA-Tencor, Mentor Graphics (through its acquisition of Ponte Solutions), Rudolph Technologies, Inc. ("Rudolph") (through its acquisition of Yield Dynamics), and Synopsys, Inc., and process control software, such as Applied Materials, Inc. (through its acquisition of the software division of Brooks Automation), BISTel Inc., MKS Instruments, Inc., Rudolph and Trancom Technology, Inc. Further, ARM Ltd. and Synopsys (through its acquisition of Virage Logic Corporation) provide standard cells in the physical IP space and Tela Innovations, Inc. provides software for standard cell synthesis, each of which could compete with our Template™ technology solution. Additionally, Optimal+ and Galaxy Semiconductor Solutions are potential competitors in semiconductor test solutions. Further, we may compete with the products or offerings of the same or additional companies if we expand our offerings through acquisition or development. Further, electronic design automation suppliers provide alternative DFM solutions that may compete for the same budgetary funds. There may be other providers of commercial solutions for systematic IC yield and performance enhancement of which we are not aware. Further, some providers of yield management software or inspection equipment may seek to broaden their product offerings and compete with us. In addition, we believe that the demand for solutions that address the need for better integration between the silicon design and manufacturing processes may encourage direct competitors to enter into our market. For example, large integrated organizations, such as IDMs, electronic design automation software providers, IC design service companies or semiconductor equipment vendors, may decide to spin-off a business unit that competes with us. Other potential competitors include fabrication facilities that may decide to offer solutions competitive with ours as part of their value proposition to their customers. If these potential competitors change the pricing environment or are able to attract industry partners or customers faster than we can, we may not be able to grow and execute our strategy as quickly or at all.

***We face operational and financial risks associated with international operations that could negatively impact our revenue.***

We have in the past expanded and reorganized, at different times, our non-U.S. operations and may in the future continue such expansion or reorganization by establishing or restructuring international subsidiaries, offices, or contractor relationships in locations, if and when, deemed appropriate by our management. Thus, the success of our business is subject to risks inherent in doing business internationally, including in particular:

- some of our key engineers and other personnel are foreign nationals and they may not be permitted access to certain technical information under U.S. export laws or by certain of our customers and may have difficulty gaining access to the United States and other countries in which our customers or our offices may be located and it may be difficult for us to recruit and retain qualified technical and managerial employees in foreign offices;
- greater difficulty in collecting account receivables resulting in longer collection periods;
- language and other cultural differences may inhibit our sales and marketing efforts and create internal communication problems among our U.S. and foreign teams, increasing the difficulty of managing multiple, remote locations performing various development, quality assurance, and yield ramp analysis projects;
- compliance with, inconsistencies among, and unexpected changes in, a wide variety of foreign laws and regulatory environments with which we are not familiar, including, among other issues, with respect to employees, personal data, protection of our IP, and a wide variety of operational regulations and trade and export controls under domestic, foreign, and international law;
- currency risk due to the fact that certain of our payables for our international offices are denominated in the local currency, including the Euro, Yen, and RMB, while virtually all of our revenues is denominated in U.S. dollars;
- quarantine, private travel limitation, or business disruption in regions affecting our operations, stemming from actual, imminent or perceived outbreak of human pandemic or contagious disease;
- in the event a larger portion of our revenues becomes denominated in foreign currencies, we would be subject to a potentially significant exchange rate risk;
- economic or political instability, including but not limited to armed conflict, terrorism, interference with information or communication of networks or systems, and the resulting disruption to economic activity and business operations;

International revenues accounted for approximately 56% of our total revenues for the year ended December 31, 2014 compared to 62% for the year ended December 31, 2013 and 60% for the year ended December 31, 2012. Thus, we face the following additional risks:

- a downturn in the local economies of our customers, which could limit our ability to retain existing customers and attract new ones in such locations; and
- if the U.S. dollar increases in value relative to local currencies the cost of our solutions will be more expensive to existing and potential local customers and therefore less competitive.

Further, our employees and contractors include professionals located in various international locations, including Shanghai, China, who provide primarily CV test chip-related services, and Ramallah, Palestine, who provide software-related development, quality assurance, maintenance, and other technical support services for certain of our software products. Political changes, including policies regarding export control, that affect these or other international operations could disrupt or limit the work our employees and contractors are able to perform, and thus negatively affect the range of services we are able to provide our customers or our cost for such services.

***Measurement of our Gainshare performance incentives requires data collection and the use of estimates in some cases, and is subject to customer agreement and later offset if actual volume results differ from the estimates, which can result in uncertainty and cause quarterly results to fluctuate.***

We can only recognize revenue based on Gainshare performance incentives once we have reached agreement with our customers on their level of yield performance improvements and quarterly agreements are sometimes based (to some degree) on estimates of volume results each quarter. Because measuring the amount of yield improvement is inherently complicated and dependent on our customers' internal information systems, there may be uncertainty as to some components of measurement. Also, because some estimates are used some customers' Gainshare results, depending on the contract, are subject to later offset when actual volume results become available. This could result in our recognition of less revenue than expected in any particular period. In addition, any delay in measuring revenue attributable to Gainshare could cause all of the associated revenue to be delayed until the next quarter, and any post-period true-up (if allowed by contract) could offset Gainshare in a later period, causing our Gainshare results to be below expectations. Since we currently have only a few large customers and we are relying on Gainshare as a significant component of our total revenues, any delay could significantly harm our quarterly results.

***Changes in the structure of our customer contracts, including the mix between fixed and variable revenue and the mix of elements, including perpetual and term-based licenses, can adversely affect the amount and timing of our total revenues.***

Our long-term success is largely dependent upon our ability to structure our future customer contracts to include a larger Gainshare performance incentives component relative to the fixed fee component. We typically recognize the fixed fee component earlier than the Gainshare component so if we are successful in increasing the Gainshare component of our customer contracts, we will experience an adverse impact on our operating results in the short term as we reduce the fixed fee component. Due to acquisitions and expanded business strategies, the mix of elements in some of our contracts has changed recently and the relative importance of the software component in some of our contracts has increased. We have experienced, and may in the future experience, delays in the expected recognition of revenue associated with generally accepted accounting principles regarding the timing of revenue recognition in multi-element software arrangements, including the effect of acceptance criteria as a result of the change in our contracts. If we fail to meet contractual acceptance criteria on time or at all, the total revenues we receive under a contract could be delayed or decline. Further, if we mix term-based licenses with perpetual licenses, it will impact the timing of the recognition of revenue from that customer. In addition, by increasing the Gainshare or the software component, we may increase the variability or timing of recognition of our revenue, and therefore increase the risk that our total future revenues will be lower than expected and fluctuate significantly from period to period.

***We have experienced losses in the past and we may be unable to maintain profitability and incur losses in the future.***

We have experienced losses in the past and we may not maintain profitability if our costs increase more quickly than we expect or if revenues decrease. In addition, virtually all of our operating expenses are fixed in the short term, so any shortfall in anticipated revenue in a given period could significantly reduce our operating results below expectations. Our accumulated deficit was \$52.2 million as of December 31, 2014. We expect to continue to incur significant expenses in connection with:

- funding for research and development;
- expansion of our solution implementation teams;
- expansion of our sales and marketing efforts; and
- additional non-cash charges relating to amortization and stock-based compensation.

As a result, if we do not significantly increase revenues to maintain profitability on a quarterly or annual basis, we would incur losses and our stock price could decline. Further, if we incur losses in the future, we may be subject to further decreases to earnings associated with the corresponding impairment of our long-lived assets.

***Inadvertent disclosure of our customers' confidential information could result in costly litigation and cause us to lose existing and potential customers.***

Our customers consider their product yield information and other confidential information, which we must gather in the course of our engagement with the customer, to be extremely competitively sensitive. If we inadvertently disclosed or were required to disclose this information, we would likely lose existing and potential customers and could be subject to costly litigation. In addition, to avoid potential disclosure of confidential information to competitors, some of our customers may, in the future, ask us not to work with key competitive products, which could limit our revenue opportunities.

***Our technologies could infringe the intellectual property rights of others, causing costly litigation and the loss of significant rights.***

Significant litigation regarding intellectual property rights exists in the semiconductor industry. It is possible that a third party may claim that our technologies infringe their intellectual property rights or misappropriate their trade secrets. Any claim, even if without merit, could be time consuming to defend, result in costly litigation, or require us to enter into royalty or licensing agreements, which may not be available to us on acceptable terms, or at all. A successful claim of infringement against us in connection with the use of our technologies could adversely affect our business.

***Our ability to sell our products may depend on the quality of our support and services offerings, and our failure to offer high-quality support and services could negatively affect our sales and results of operations.***

Once our software products are integrated within our customers' hardware and software systems, our customers may depend on our support organization to resolve any issues relating to our products. A high level of support is critical for the successful marketing and sale of our products. If we do not effectively assist our customers in deploying our products, succeed in helping our customers quickly resolve post-deployment issues, and provide effective ongoing support, our ability to sell our software products to existing customers may be negatively affected, and our reputation with potential customers could be harmed. If our software customers have a poor perception of our support and services offerings, they may choose not to renew software support and maintenance when the current period expires. In addition, due to our international operations, our support organization faces challenges associated with delivering support, training, and documentation where the user's native language may not be English. If we fail to maintain high-quality support and services, our customers may choose our competitors' products instead of ours in the future, which would negatively affect our revenues and results of operations.

***Defects in our proprietary technologies, hardware and software tools, and the cost of support to remedy any such defects could decrease our revenue and our competitive market share.***

If the software, hardware, or proprietary technologies we provide to a customer contain defects that increase our customer's cost of goods sold and time-to-market or damage our customer's property, these defects could significantly decrease the market acceptance of our solutions. Further, the cost of support resources required to remedy any defects in our technologies, hardware, or software tools could exceed our expectations. Any actual or perceived defects with our software, hardware, or proprietary technologies may also hinder our ability to attract or retain industry partners or customers, leading to a decrease in our revenue. These defects are frequently found during the period following introduction of new software, hardware, or proprietary technologies or enhancements to existing software, hardware, or proprietary technologies. Our software, hardware, and proprietary technologies may contain errors not discovered until after customer implementation of the silicon design and manufacturing process recommended by us. If our software, hardware, or proprietary technologies contain errors or defects, it could require us to expend significant resources to remedy these problems, which could reduce margins and result in the diversion of technical and other resources from our other customer implementations and development efforts.

***Failing to maintain the effectiveness of our internal controls over financial reporting could impede our ability to provide accurate and timely financial information, which could cause our investors to lose confidence in the accuracy and completeness of our financial reports and could cause our stock price to decline.***

In the past, we identified material weaknesses in connection with the evaluation of the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act ("Section 404"). These control deficiencies resulted in adjustments during the 2009 audit to our consolidated financial statements for the year ended December 31, 2009, and during the 2010 audit to our consolidated financial statements for the year ended December 31, 2010. In the future, our management may identify additional deficiencies regarding the design and operating effectiveness of our system of internal control and we may not be able to remediate such deficiencies in time to meet the continuing reporting deadlines imposed by Section 404. Further, any costs of remediation may be substantial. A material weakness in our internal controls could result in a material misstatement not being prevented or detected, which could result in the need for a restatement of past periods. Moreover, our independent registered public accounting firm may deem that we did not maintain, in all material respects, effective internal control over financial reporting if we are unable to remediate deficiencies on a timely basis. If we fail to remediate material weaknesses, fail to implement required new or improved controls, encounter difficulties in their implementation, or are unable at any time to assert that we maintain effective internal controls, it could harm our operating results, cause us to fail to meet our SEC reporting obligations on a timely basis, result in material misstatements, and our investors could lose confidence in the accuracy and completeness of our financial reports and our stock price could decline.

***Changes in effective tax rates could negatively affect our operating results and we may not be able to use tax credits before their expiration if we fail to have sufficient future income.***

We conduct our business globally and, as a result, are subject to taxation in the United States and foreign countries. Our future tax rates could be affected by numerous factors, including changes in tax laws or the interpretation of such tax laws and changes in accounting policies. Our filings are subject to reviews or audit by the Internal Revenue Service and state, local and foreign taxing authorities. We cannot be sure that any final determination in an audit would not be materially different than the treatment reflected in our historical income tax provisions and accruals. If additional taxes are assessed as a result of an audit, there could be a significant negative effect on our income tax provision and our operating results in the period or periods for which that determination is made. Any changes in our geographical earnings mix in various tax jurisdictions, including those resulting from transfer pricing adjustments, could materially increase our effective tax rate. Furthermore, we maintain deferred tax assets related to federal, foreign and certain state tax credits. Our ability to use these credits prior to their expiration is dependent upon having sufficient future income.

## **Item 2. Unregistered Sales of Equity Securities and Use of Proceeds**

The table below sets forth the information with respect to purchases made by or on behalf of the Company or any "affiliated purchaser" (as the term is defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934) of our common stock during the three months ended March 31, 2015 (in thousands except per share amounts):

## ISSUER PURCHASES OF EQUITY SECURITIES

| Period  | Total<br>Number of<br>Shares<br>Purchased<br>(1) | Average<br>Price Paid<br>Per Share | Total<br>Number of<br>Shares<br>Purchased<br>as<br>Part of<br>Publicly<br>Announced<br>Programs<br>(1) | Approximate<br>Dollar<br>Value of<br>Shares that<br>May Yet Be<br>Purchased<br>Under<br>Programs(1) |
|---|--|------------------------------------|--|---|
| Month #1 (January 1, 2015 through January 31, 2015)   | —  | \$ —                               | —  | \$ 25,000   |
| Month #2 (February 1, 2015 through February 28, 2015) | 6  | \$ 18.48                           | 105  | \$ 24,895   |
| Month #3 (March 1, 2015 through March 31, 2015)       | 194  | \$ 18.02                           | 3,499  | \$ 21,396   |
| Total   | <u>200</u>                                       | \$ 18.03                           | <u>3,604</u>   |   |

- (1) On October 21, 2014, the Board of Directors adopted a program, effectively immediately, to repurchase up to \$25.0 million of the Company's common stock both on the open market and in privately negotiated transactions over the next two years.

### Item 3. Defaults Upon Senior Securities

None.

### Item 4. Mine Safety Disclosures

None.

### Item 5. Other Information

None.

**Item 6. Exhibits**

| <b>Exhibit<br/>Number</b> | <b>Description</b>  |
|---------------------------|---|
| 31.01                     | Certification of the principal executive officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.                |
| 31.02                     | Certification of the principal financial and accounting officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. |
| 32.01                     | Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.   |
| 32.02                     | Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.   |
| 101.INS                   | XBRL Instance Document.   |
| 101.SCH                   | XBRL Taxonomy Extension Schema Document.  |
| 101.CAL                   | XBRL Taxonomy Extension Calculation Linkbase Document.  |
| 101.DEF                   | XBRL Taxonomy Extension Definition Linkbase Document.   |
| 101.LAB                   | XBRL Taxonomy Extension Label Linkbase Document.  |
| 101.PRE                   | XBRL Taxonomy Extension Presentation Linkbase Document.   |

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

### PDF SOLUTIONS, INC.

Date: May 4, 2015

By: /s/ JOHN K. KIBARIAN  
John K. Kibarian  
President and Chief Executive Officer  
(principal executive officer)

Date: May 4, 2015

By: /s/ GREGORY C. WALKER  
Gregory C. Walker  
Vice President, Finance and Chief Financial Officer  
(principal financial and accounting officer)

## INDEX TO EXHIBITS

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## CERTIFICATIONS

I, John K. Kibarian, certify that:

1. I have reviewed this quarterly report on Form 10-Q of PDF Solutions, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ JOHN K. KIBARIAN

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John K. Kibarian  
*President and Chief Executive Officer*  
*(principal executive officer)*

Date: May 4, 2015

## CERTIFICATIONS

I, Gregory C. Walker, certify that:

1. I have reviewed this quarterly report on Form 10-Q of PDF Solutions, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ GREGORY C. WALKER

Gregory C. Walker  
*Vice President, Finance and Chief Financial Officer*  
*(principal financial and accounting officer)*

Date: May 4, 2015

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of PDF Solutions, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2015, as filed with the Securities and Exchange Commission on May 4, 2015 (the "Report"), I, John K. Kibarian, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

By: /s/ JOHN K. KIBARIAN  
John K. Kibarian  
*President and Chief Executive Officer*  
*(principal executive officer)*

Date: May 4, 2015

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of PDF Solutions, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2015 as filed with the Securities and Exchange Commission on May 4, 2015 (the "Report"), I, Gregory C. Walker, Vice President, Finance and Chief Financial Officer, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

By: /s/ GREGORY C. WALKER

Gregory C. Walker  
*Vice President, Finance and Chief Financial Officer*  
*(principal financial and accounting officer)*

Date: May 4, 2015

