PDF SOLUTIONS INC
Form 10-Q
May 03, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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, 2017

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	**25-1701361**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

333 West San Carlos Street, Suite 1000	
San Jose, California	**95110**
(Address of Principal Executive Offices)	(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 (Do not check if a smaller reporting company)	Smaller reporting company
Emerging growth company	

If an emerging growth company, indicated by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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 26, 2017 was 32,142,332.

TABLE OF CONTENTS

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

PDF SOLUTIONS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(unaudited)

(in thousands, except par value)

	March 31, 2017	**December 31, 2016**
ASSETS		
Current assets:		
Cash and cash equivalents	$114,926	$116,787
Accounts receivable, net of allowance of $200	50,088	48,157
Prepaid expenses and other current assets	6,741	5,335
Total current assets	171,755	170,279
Property and equipment, net	20,798	19,341
Goodwill	215	215
Intangible assets, net	4,035	4,223
Deferred tax assets	16,201	15,640
Other non-current assets	14,615	12,631
Total assets	$227,619	$222,329
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$2,436	$2,206
Accrued compensation and related benefits	4,988	5,959
Accrued and other current liabilities	1,913	2,080
Deferred revenues – current portion	9,777	8,189
Billings in excess of recognized revenue	200	88
Total current liabilities	19,314	18,522
Long-term income taxes payable	3,247	3,354
Other non-current liabilities	1,802	1,650
Total liabilities	24,363	23,526
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 38,810 and 38,514, respectively; shares outstanding 32,124 and 31,864, respectively	5	5
Additional paid-in-capital	285,930	281,423
Treasury stock at cost, 6,687 and 6,650 shares, respectively	(55,726)	(54,882)
Accumulated deficit	(25,235)	(25,752)
Accumulated other comprehensive loss	(1,718)	(1,991)
Total stockholders’ equity	203,256	198,803
Total liabilities and stockholders’ equity	$ 227,619	$ 222,329

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)

	Three Months Ended March 31,	
	2017	**2016**
Revenues:		
Design-to-silicon-yield solutions	$19,698	$18,578
Gainshare performance incentives	4,591	6,503
Total revenues	24,289	25,081
Costs of Design-to-silicon-yield solutions		
Direct costs of Design-to-silicon-yield solutions	11,335	10,110
Amortization of acquired technology	96	96
Total cost of Design-to-silicon-yield solutions	11,431	10,206
Gross profit	12,858	14,875
Operating expenses:		
Research and development	7,282	6,311
Selling, general and administrative	5,899	5,124
Amortization of other acquired intangible assets	92	117
Total operating expenses	13,273	11,552
Income (loss) from operations	(415)	3,323
Interest and other income (expense), net	(230)	(236)
Income (loss) before income taxes	(645)	3,087
Income tax provision (benefit)	(1,162)	1,026
Net income	$517	$2,061
Net income per share:		
Basic	$0.02	$0.07
Diluted	$0.02	$0.07
Weighted average common shares:		
Basic	31,991	31,168
Diluted	33,594	31,754
Net income	$517	$2,061
Other comprehensive income:		

Foreign currency translation adjustments, net of tax	273	360
Comprehensive income	$790	$2,421

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

PDF SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited)

(in thousands)

	Three Months Ended March 31,	
	2017	2016
Operating activities:		
Net income	$517	$2,061
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Depreciation and amortization	1,091	765
Stock-based compensation expense	2,884	2,666
Amortization of acquired intangible assets	188	213
Deferred taxes	(580)	458
Loss on disposal of property and equipment	-	107
Provision for doubtful accounts	-	53
Unrealized loss (gain) on foreign currency forward contract	92	(23)
Changes in operating assets and liabilities:		
Accounts receivable, net of allowance	(1,931)	4,062
Prepaid expenses and other current assets	(1,395)	178
Accounts payable	476	250
Accrued compensation and related benefits	(1,040)	(564)
Accrued and other liabilities	(587)	(833)
Deferred revenues	1,734	1,674
Billings in excess of recognized revenues	112	(1,153)
Other non-current assets	(1,977)	(5,917)
Net cash (used in) provided by operating activities	(416)	3,997
Investing activities:		
Purchases of property and equipment	(2,313)	(1,780)
Net cash used in investing activities	(2,313)	(1,780)
Financing activities:		
Proceeds from exercise of stock options	717	182
Proceeds from employee stock purchase plan	909	777
Payments for taxes related to net share settlement of equity awards	(844)	(9)
Net cash provided by financing activities	782	950
Effect of exchange rate changes on cash and cash equivalents	86	73
Net change in cash and cash equivalents	(1,861)	3,240
Cash and cash equivalents, beginning of period	116,787	126,158
Cash and cash equivalents, end of period	$114,926	$129,398
Supplemental disclosure of cash flow information:		

Cash paid during the period for:		
Taxes	$681	$281
Property and equipment received and accrued in accounts payable and accrued and other liabilities	$885	$1,218

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, 2016.

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

The condensed consolidated balance sheet at December 31, 2016, 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, accounting for goodwill and intangible assets, 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 — Revenues that are derived from Design-to-silicon-yield solutions come from services and software and hardware licenses. The Company recognizes revenue for each element 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 percentage of completion method of contract accounting based on costs or labor-hours input method, whichever is the most appropriate measure of the progress towards completion of the contract. 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 (cumulative catch-up method). During the period ended March 31, 2017, the Company recognized changes in one of its project's profitability from revisions in estimates due to the scope changes that resulted in unfavorable changes of net income of $0.6 million or $0.01 per diluted share. 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, if applicable, 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 selling price. Fees allocated to solution implementation services are recognized using the percentage of completion method of contract accounting. Fees allocated to software and related support and maintenance are recognized under software revenue recognition guidance.

In some instances, the Company also licenses its DFI system as a separate component of fixed-price service contracts. The Company allocates revenue to all deliverables based on their relative selling prices. The Company currently does not have VSOE for its DFI system, thus the Company uses either TPE or BESP in the allocation of arrangement consideration.

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. The Company also defers costs from arrangements that required us to defer the revenues, typically due to revenue recognition from multi-element arrangements or from contracts subject to customer acceptance. These costs are recognized in proportion to the related revenue. At the end of the 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. Deferred costs balance was $0.6 million and $0.5 million as of March 31, 2017 and December 31, 2016, respectively. The balance was included in prepaid expenses and other current assets and other non-current assets in the accompanying consolidated balance sheets.

The Company also licenses its software products separately from 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 (l) 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 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. When software is licensed for a specified term, fees for support and maintenance are generally bundled with the license fee over the entire term of the contract. The Company is unable to establish VSOE of fair value for maintenance services that are generally bundled with term licenses. In these cases, the Company recognizes revenue ratably over the term of the contract. For multiple-element arrangements containing non-software services, the Company: (1) determines whether each element constitutes a separate unit of accounting; (2) determines the fair value of each element using the selling price hierarchy of VSOE, TPE or BESP, as applicable; and (3) allocates the total price to each separate unit of accounting based on the relative selling price method. An element constitutes a separate unit of accounting when the delivered item has standalone value and delivery of the undelivered element is probable and within our control. For multiple-element arrangements that contain both software and non-software elements, the Company allocates revenue to software or software-related elements as a group and any non-software elements separately based on the selling price hierarchy of VSOE, TPE or BESP. Once revenue is allocated to software or software-related elements as a group, we recognize revenue in conformance with software revenue accounting guidance. Revenue is recognized when revenue recognition criteria are met for each element.

Revenue from software-as-a-service (SaaS) that allow for the use of a hosted software product or service over a contractually determined period of time without taking possession of software are accounted for as subscriptions and recognized as revenue ratably over the coverage period beginning on the date the service is made available to customers. 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 percentage of completion method of contract accounting, and such revenue is recorded as services revenue.

Deferred revenues consist substantially of amounts invoiced in advance of revenue recognition and is recognized as the revenue recognition criteria are met. Deferred revenues that will be recognized during the succeeding 12 month period is recorded as current deferred revenues and the remaining portion is recorded as non- current deferred revenues. Non-current portion of deferred revenue was $1.7 million and $1.5 million, respectively, as of March 31, 2017 and December 31, 2016. This balance was recorded in the other non-current liabilities in the accompanying consolidated balance sheets.

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 virtually 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 FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606) as modified by ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net), ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, ASU No. 2016-11, Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815), ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, and ASU 2016-20, Revenue from Contracts with Customers (Topic 606): Technical Corrections and Improvements. The new revenue recognition standard provides a five-step analysis of transactions to determine when and how revenue is recognized. 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 to which the entity expects to be entitled in exchange for those goods or services. This new standard is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The new standard also permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). The Company has not yet selected a transition method nor has it determined the effect of the standard on its ongoing financial reporting

In February 2016, the Financial Accounting Standards Board (or FASB) issued ASU No. 2016-02, Leases (Topic 842). The update requires that most leases, including operating leases, be recorded on the balance sheet as an asset and a liability, initially measured at the present value of the lease payments. Subsequently, the lease asset will be amortized generally on a straight-line basis over the lease term, and the lease liability will bear interest expense and be reduced for lease payments. The amendments in this update are effective for public companies' financial statements issued for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is still in the process of evaluating the impact of adopting this new accounting standard on its consolidated financial statements and footnote disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments. The purpose of this standard is to clarify the treatment of several cash flow categories. This update is effective for annual periods beginning after December 15, 2017, and interim periods within those fiscal years, with early adoption permitted, including adoption in an interim period. The Company is currently assessing the impact that adopting this new accounting standard will have on its consolidated financial statements and footnote disclosures.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles - Goodwill and Other (Topic 350) ("ASU No. 2017-04"). ASU No. 2017-04 eliminates step 2 from the annual goodwill impairment test. This update is effective for annual periods beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted, and is to be applied on a prospective basis. The Company is currently assessing the impact that adopting this new accounting standard will have on its consolidated financial statements and footnote disclosures.

3. BALANCE SHEET COMPONENTS

Accounts receivable include amounts that are unbilled at the end of the period that are expected to be billed and collected within 12-month period. Unbilled accounts receivable are primarily determined on an individual contract basis. Unbilled accounts receivable, included in accounts receivable, totaled $22.7 million and $20.8 million as of March 31, 2017 and December 31, 2016, respectively. Unbilled accounts receivable that are not expected to be billed and collected during the succeeding 12-month period are recorded in other non-current assets and totaled $11.8 million and $9.8 million as of March 31, 2017 and December 31, 2016, respectively. Deferred costs balance was $0.6 million and $0.5 million as of March 31, 2017 and December 31, 2016, respectively. The balance was included in prepaid expense and other current assets and other non-current assets in the accompanying balance sheets.

Property and equipment, net consists of (in thousands):

	March 31, 2017	**December 31, 2016**
Property and equipment, net:		
Computer equipment	$ 10,568	$ 10,642
Software	2,363	1,679
Furniture, fixtures and equipment	1,811	1,185
Leasehold improvements	1,961	1,132
Test equipment	11,843	11,723
Construction-in-progress	9,575	9,550
	38,121	35,911
Less: accumulated depreciation	(17,323)	(16,570)
Total	$ 20,798	$ 19,341

Depreciation and amortization expense was $1.1 million and $0.8 million for the three months ended March 31, 2017 and 2016, respectively.

As of both March 31, 2017 and December 31, 2016, the carrying amount of goodwill was $0.2 million. The following is a rollforward of the Company's goodwill balance (in thousands):

	March 31, 2017
Balance as of December 31, 2016	$ 215
Add: Goodwill from acquisition	—
Adjustment	—
Balance as of March 31, 2017	$ 215

Intangible assets balance was $4.0 million and $4.2 million as of March 31, 2017 and December 31, 2016, respectively. Intangible assets as of March 31, 2017 and December 31, 2016 consist of the following (in thousands):

	Amortization Period (Years)	**March 31, 2017** Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	**December 31, 2016** Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Acquired identifiable intangibles:							
Customer relationships	1 - 9	$5,920	$ (3,895)	$ 2,025	$5,920	$ (3,825)	$ 2,095
Developed technology	4 - 6	14,100	(12,455)	1,645	14,100	(12,359)	1,741
Tradename	2 - 4	610	(595)	15	610	(583)	27
Backlog	1	100	(100)	-	100	(100)	-
Patent	7 - 10	1,800	(1,450)	350	1,800	(1,440)	360
Other acquired intangibles	4	255	(255)	-	255	(255)	-
Total		$22,785	$ (18,750)	$ 4,035	$22,785	$ (18,562)	$ 4,223

The weighted average amortization period for acquired identifiable intangible assets was 6.18 years as of March 31, 2017. For both the three months ended March 31, 2017 and 2016, intangible asset amortization expense was $0.2 million. The Company expects annual amortization of acquired identifiable intangible assets to be as follows (in thousands):

Period Ending March 31,	
2017	$540

2018	701
2019	701
2020	701
2021	526
2022 and thereafter	866
Total future amortization expense	$4,035

Intangible assets are amortized over their useful lives unless these lives are determined to be indefinite. Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. During the three months ended March 31, 2017, there were no indicators of impairment related to the Company's intangible assets.

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 expense before taxes related to the Company's stock plans and employee stock purchase plan was allocated as follows (in thousands):

	Three Months Ended March 31,	
	2017	**2016**
Cost of Design-to-silicon-yield solutions	$1,192	$1,085
Research and development	834	706
Selling, general and administrative	858	875
Stock-based compensation expenses	$2,884	$2,666

On March 31, 2017, the Company had 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 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 and then subsequently amended at the 2016 annual meeting of stockholders on May 31, 2016, when the Company's stockholders approved the third amended and restated 2011 Stock 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 7,800,000 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.

On April 11, 2017, the Company's Board of Directors amended the 2011 Plan, subject to stockholder approval to increase the number of shares reserved for awards under it to a total of 9,050,000 shares, which is an increase of an additional 1,250,000 shares.

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 2001Plan 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, respectively.

The Company estimated the fair value of share-based awards granted under the 2011 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:

	Three Months Ended March 31,

	2017	**2016**
Expected life (in years)	4.41	4.42
Volatility	40.57 %	44.74 %
Risk-free interest rate	1.87 %	1.21 %
Expected dividend	—	—
Weighted average fair value per share of options granted during the period	$7.85	$4.08

As of March 31, 2017, 8.3 million shares of common stock were reserved to cover stock-based awards under the 2011 Plan, of which 3.5 million shares were available for future grant. The number of shares reserved and available under the 2011 Plan includes 0.5 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, 2017. As of March 31, 2017, there were no outstanding awards that had been granted outside of the 2011 Plan, 2001 Plan or the IDS Plan (collectively, the "Stock Plans").

Stock option activity under the Company's Stock Plans during the three months ended March 31, 2017, was as follows:

	Number of Options (in thousands)	**Weighted Average Exercise Price per Share**	**Weighted Average Remaining Contractual Term (years)**	**Aggregate Intrinsic Value (in thousands)**
Outstanding, January 1, 2017	1,364	$ 8.00		
Granted (weighted average fair value of $7.84 per share)	9	$ 21.94		
Exercised	(89)	$ 8.09		
Canceled	(3)	$ 17.73		
Expired	-	$ -		
Outstanding, March 31, 2017	1,281	$ 8.06	4.28	$ 18,659
Vested and expected to vest, March 31, 2017	1,272	$ 8.01	4.25	$ 18,592
Exercisable, March 31, 2017	1,145	$ 7.21	3.73	$ 17,639

The aggregate intrinsic value in the table above represents the total intrinsic value based on the Company's closing stock price of $22.62 per share as of March 31, 2017. The total intrinsic value of options exercised during the three months ended March 31, 2017, was $1.2 million.

As of March 31, 2017, there was $0.6 million of total unrecognized compensation cost related to unvested stock options. That cost is expected to be recognized over a weighted average period of 2.9 years. The total fair value of shares vested during the three months ended March 31, 2017, was $0.1 million.

Nonvested restricted stock units activity during the three months ended March 31, 2017, was as follows:

	Shares (in thousands)	**Weighted Average Grant Date Fair Value Per Share**

Nonvested, January 1, 2017	1,542	$ 15.50
Granted	9	$ 21.94
Vested	(109)	$ 14.04
Forfeited	(7)	$ 15.84
Nonvested, March 31, 2017	1,435	$ 15.64

As of March 31, 2017, there was $17.8 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 2.6 years. Restricted stock units do not have rights to dividends prior to vesting.

Employee Stock Purchase Plan — In July 2001, the Company adopted a ten-year Employee Stock Purchase Plan (as amended, the "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, starting with 2002, 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 Ended March 31,	
	2017	**2016**
Expected life (in years)	1.25	1.25
Volatility	33.32 %	44.15 %
Risk-free interest rate	0.93 %	0.50 %
Expected dividend	—	—
Weighted average fair value per share of options granted during the period	$ 6.78	$ 3.56

During the three months ended March 31, 2017 and 2016, a total of 100,000 and 84,000 shares, respectively, were issued at a weighted-average purchase price of $9.13 and $9.21 per share, respectively. As of March 31, 2017, there was $0.8 million of unrecognized compensation cost related to the Purchase Plan. That cost is expected to be recognized over a weighted average period of 1.1 years. As of March 31, 2017, 4.4 million shares were available for future issuance under the Purchase Plan.

Stock Repurchase Program —On October 25, 2016, 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. As of March 31, 2017, there has been no common stock repurchased under this new program and $25.0 million remained available for future repurchases.

5. INCOME TAXES

Income tax provision decreased $2.2 million for the three months ended March 31, 2017, to $1.2 million income tax benefit as compared to an income tax provision of $1.0 million for the three months ended March 31, 2016. The Company’s effective tax rate was 180% and 33% for the three months ended March 31, 2017 and 2016, respectively. The Company’s effective tax rate increased in the three months ended March 31, 2017, as compared to the same period in 2016, primarily due to the recognition of excess tax benefits related to employee stock compensation of $0.7 million as a result of the adoption of ASU 2016-09 as well as the changes in unrecognized tax benefit.

The Company’s total amount of unrecognized tax benefits, excluding interest and penalties, as of March 31, 2017, was $11.8 million, of which $7.0 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, 2016, was $11.9 million, of which $7.2 million, if recognized, would affect the Company's effective tax rate. As of March 31, 2017, the Company has recorded unrecognized tax benefits of $2.7 million, including interest and penalties, as long-term taxes payable in its condensed consolidated balance sheet. The remaining $9.6 million has been recorded net of our deferred tax assets, of which $4.8 million is subject to a full valuation allowance.

The valuation allowance was approximately $6.7 million and $6.8 million as of March 31, 2017 and December 31, 2016, respectively, which was related to California R&D tax credits and California net operating losses related to our acquisition of Syntricity that we currently do not believe are more likely than not to be ultimately realized.

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 of its major foreign subsidiaries' jurisdictions.

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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. 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):

	Three Months Ended March 31,	
	2017	**2016**
Numerator:		
Net income	$517	$2,061
Denominator:		
Basic weighted-average shares outstanding	31,991	31,168
Effect of dilutive options and restricted stock	1,603	586
Diluted weighted average shares outstanding	33,594	31,754
Net income per share - Basic	$0.02	$0.07
Net income per share - Diluted	$0.02	$0.07

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):

	Three Months Ended March 31, 2017	2016
Outstanding options	40	284
Nonvested restricted stock units	-	1,026
Employee Stock Purchase Plan	30	460
Total	70	1,770

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:

Customer	Three Months Ended March 31, 2017	2016
A	48%	50 %
B	* %	14 %

* represents less than 10%

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

Customer	**March 31, 2017**		**December 31, 2016**	
A	41	%	42	%
C	13	%	13	%

* represents less than 10%

13

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

	Three Months Ended March 31,					
	2017			2016		
	Revenues	Percentage of Revenues		Revenues	Percentage of Revenues	
United States	$11,634	48	%	$12,121	48	%
Taiwan	3,837	16		2,184	9	
Germany	2,308	10		3,035	12	
South Korea	1,990	8		3,313	13	
Rest of the world	4,520	18		4,428	18	
Total revenue	$24,289	100	%	$25,081	100	%

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

	March 31, 2017	December 31, 2016
United States	$20,248	$ 18,818
Rest of the world	550	523
Total long-lived assets, net	$20,798	$ 19,341

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, 2017, and the basis for that measurement (in thousands):

Assets	**Total**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Money market mutual funds	$26,483	$ 26,483	$ —	$ —

The following table represents the Company’s assets measured at fair value on a recurring basis as of December 31, 2016, and the basis for that measurement (in thousands):

Assets	**Total**	**Quoted Prices in Active Markets for Identical**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**

		Assets **(Level 1)**		
Money market mutual funds	$26,456	$26,456	$ —	$ —

14

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, 2017 and 2016, the Company recognized a realized gain of $0.1 million and $0.3 million on the contracts, respectively, which was recorded in other income (expense), net in the Company's Statements of Operations and Comprehensive Income.

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, 2017, the Company had one outstanding forward contract with a notional amount of $7.2 million and recorded $0.1 million other current liabilities associated with this outstanding forward contract. As of December 31, 2016, the Company had one outstanding forward contract with a notional amount of $6.9 million and had recorded $15,000 other current liabilities associated with the 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 2024. Rent expense was $0.5 million and $0.6 million for the three months ended March 31, 2017 and 2016, respectively.

Future minimum lease payments under noncancelable operating leases at March 31, 2017, are as follows (in thousands):

Period Ending March 31,	**Amount**
2017 (remaining nine months)	$ 1,434
2018	1,307

2019	439
2020	374
2021	291
2022 and thereafter	73
Total future minimum lease payments	$ 3,918

Indemnifications — The Company generally provides a warranty to its customers that its software will perform substantially in accordance with documented specifications typically for a period of 90 days following delivery of its products. The Company also indemnifies certain customers from third-party claims of intellectual property infringement relating to the use of its products. Historically, costs related to these guarantees have not been significant. The Company is unable to estimate the maximum potential impact of these guarantees on its future results of operations.

Purchase obligations — The Company has purchase obligations with certain suppliers for the purchase of goods and services entered in the ordinary course of business. As of March 31, 2017, total outstanding purchase obligations were $9.1 million, which are primarily due within the next 12 months.

Indemnification of Officers and Directors — As permitted by the Delaware general corporation law, the Company has included a provision in its certificate of incorporation to eliminate the personal liability of its officers and directors for monetary damages for breach or alleged breach of their fiduciary duties as officers or directors, other than in cases of fraud or other willful misconduct.

In addition, the Bylaws of the Company provide that the Company is required to indemnify its officers and directors even when indemnification would otherwise be discretionary, and the Company is required to advance expenses to its officers and directors as incurred in connection with proceedings against them for which they may be indemnified. The Company has entered into indemnification agreements with its officers and directors containing provisions that are in some respects broader than the specific indemnification provisions contained in the Delaware general corporation law. The indemnification agreements require the Company to indemnify its officers and directors against liabilities that may arise by reason of their status or service as officers and directors other than for liabilities arising from willful misconduct of a culpable nature, to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified, and to obtain directors' and officers' insurance if available on reasonable terms. The Company has obtained directors' and officers' liability insurance in amounts comparable to other companies of the Company's size and in the Company's industry. Since a maximum obligation of the Company is not explicitly stated in the Company's Bylaws or in its indemnification agreements and will depend on the facts and circumstances that arise out of any future claims, the overall maximum amount of the obligations cannot be reasonably estimated.

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. As of March 31, 2017, the Company was not party to any material legal proceedings, thus no loss was probable and no amount was accrued.

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. All statements other than statements of historical fact may be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "could," "should," "expect," "plan," "anticipate," "beli "estimate," "predict," "potential", "target" or "continue," the negative effect of terms like these or other similar expressions. Ar 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 1. "Business" and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission on March 8, 2017. 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 expect that the largest logic foundries will continue to invest significantly in leading edge nodes and capacity throughout 2017. Leading foundries continue to invest in new technologies such as multi-patterned lithography and 3-D transistor architecture. In addition, China’s investment in semiconductors should accelerate the growth of the industry in the next few years. These provide opportunities to increase our business.

Although capacity utilization on 28nm increased from the second quarter of 2016 through the end of 2016, several foundries have stated they expect an inventory correction in 28nm that started in the first quarter of 2017 to continue through the first half of this year. We expect our Gainshare results to be consistent with those general market trends. We saw utilization on 14nm increase in the second half of 2016, dip just slightly in the first quarter of 2017, and expect it to continue to grow throughout 2017. Gainshare revenue will continue to fluctuate quarter to quarter despite these utilization trends as our Gainshare revenue depends on many factors, including the average selling price of wafers subject to Gainshare and volume.

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 like ours 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. 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, 2016, and in Item 1A, "Risk Factors," on pages 13 through 20 of our Annual Report on Form 10-K for the year ended December 31, 2016, 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, 2017, were as follows:

- Total revenues for the three months ended March 31, 2017, were $24.3 million, a decrease of $0.8 million, or 3%, compared to $25.1 million for the three months ended March 31, 2016. Design-to-silicon-yield solutions revenue for the three months ended March 31, 2017, was $19.7 million, an increase of $1.1 million, or 6%, when compared to Design-to-silicon yield solutions revenue of $18.6 million for the three months ended March 31, 2016. The increase in Design-to-silicon-yield solutions was primarily the result of more billable hours to revenue generating projects in the period due to increased business activity, particularly in Asia, and an increase in the revenue from our Exensio big data solution. Gainshare performance incentives revenue for the three months ended March 31, 2017, was $4.6 million, a decrease of $1.9 million, or 29%, compared to $6.5 million for the three months ended March 31, 2016. The decrease in revenue from Gainshare performance incentives was primarily the result of lower gainshare from 28nm volumes, partially offset by higher gainshare from 14nm volumes, compared to the volumes from those nodes for the three months ended March 31, 2016.

- Net income for the three months ended March 31, 2017 was $0.5 million, compared to net income of $2.1 million for the three months ended March 31, 2016. The decrease in net income was primarily attributable to a $2.0 million decrease in gross margin due to the mix shift between Design-to-silicon yield solutions and Gainshare performance incentive revenue and a $1.7 million increase in operating expense, primarily driven by the continued activity related to our development of DFI solution, offset by a $2.2 million decrease in tax provision primarily due to the recognition of excess tax benefits related to employee stock compensation as a result of the adoption of ASU 2016-09 as well as the changes in unrecognized tax benefit.

- Net income per basic and diluted share was $0.02 for the three months ended March 31, 2017, as compared to net income per basic and diluted share of $0.07 for the three months ended March 31, 2016.

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, 2016. 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 revenues from two sources: Design-to-silicon-yield Solutions and Gainshare performance incentives.

Design-to-silicon-yield solutions — Revenues that are derived from Design-to-silicon-yield solutions come from services and software and hardware licenses. We recognize revenue for each element of 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 percentage of completion method of contract accounting based on costs or labor-hours input method, whichever is the most appropriate measure of the progress towards completion of the contract. 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, 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, if applicable, 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, 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 the 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 selling price. Fees allocated to solution implementation services are recognized using the percentage of completion method of contract accounting. Fees allocated to software and related support and maintenance are recognized under software revenue recognition guidance.

In some instances, we also license our DFI system as a separate component of fixed-price service contracts. We allocate revenue to all deliverables based on their relative selling prices. We currently do not have VSOE for our DFI system, thus we use either TPE or BESP in the allocation of arrangement consideration.

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 persuasive evidence of contract arrangement assuming all other revenue recognition criteria are met. We also defer costs from arrangements that required us to defer the revenues, typically due to revenue recognition from multi-element arrangements or from contracts subject to customer acceptance. These costs are recognized in proportion to the related revenue. At the end of reporting period, we evaluate its 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.

We also license our software products separately from 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 (l) 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 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 our customary pricing for such services when sold separately. When software is licensed for a specified term, fees for support and maintenance are generally bundled with the license fee over the entire term of the contract. We are unable to establish VSOE of fair value for maintenance services that are generally bundled with term licenses. In these cases, we recognize revenue ratably over the term of the contract. For multiple-element arrangements containing non-software services, the Company: (1) determines whether each element constitutes a separate unit of accounting; (2) determines the fair value of each element using the selling price hierarchy of VSOE, TPE or BESP, as applicable; and (3) allocates the total price to each separate unit of accounting based on the relative selling price method. An element constitutes a separate unit of accounting when the delivered item has standalone value and delivery of the undelivered element is probable and within our control. For multiple-element arrangements that contain both software and non-software elements, we allocate revenue to software or software-related elements as a group and any non-software elements separately based on the selling price hierarchy of VSOE, TPE or BESP. Once revenue is allocated to software or software-related elements as a group, we recognize revenue in conformance with software revenue accounting guidance. Revenue is recognized when revenue recognition criteria are met for each element.

Revenue from software-as-a-service (or SaaS) that allow for the use of a hosted software product or service over a contractually determined period of time without taking possession of software are accounted for as subscriptions and recognized as revenue ratably over the coverage period beginning on the date the service is made available to customers. 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 percentage of completion method of contract accounting, and such revenue is recorded as services revenue.

Deferred revenues consist substantially of amounts invoiced in advance of revenue recognition and is recognized as the revenue recognition criteria are met. Deferred revenues that will be recognized during the succeeding 12 month period is recorded as current deferred revenues and the remaining portion is recorded as non- current deferred revenues.

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 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 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 virtually no cost to us. Due to the uncertainties surrounding attainment of such operational levels, we recognize 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.

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 (benefit) in the condensed consolidated statements of operations. The valuation allowance was approximately $6.7 million and $6.8 million as of March 31, 2017 and December 31, 2016, respectively, which was related to California R&D tax credits and California net operating losses related to acquisition that we currently do not believe to be more likely than not to be ultimately realized. 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 and net operating loss carry forward 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. At March 31, 2017, no deferred taxes have been provided on undistributed earnings of approximately $6.5 million from the Company's international subsidiaries since these earnings have been, and under current plans will continue to be, permanently reinvested outside the United States. It is not practicable to determine the amount of the unrecognized tax liability at this time.

Software Development Costs

Internally developed software includes software developed to meet our internal needs to provide solution implementation services to our end-customers. These capitalized costs consist of internal compensation related costs and external direct costs incurred during the application development stage and are amortized over their useful lives, generally six years. The costs to develop software that is marketed externally have not been capitalized as we believe our current software development process is essentially completed concurrent with the establishment of technological feasibility. As such, all related software development costs are expensed as incurred and included in research and development expense in our consolidated statements of operations.

Goodwill and Intangible Assets

We record goodwill when the purchase consideration of an acquisition exceeds the fair value of the net tangible and identified intangible assets as of the date of acquisition. We perform an annual impairment assessment of goodwill during the fourth quarter of each calendar year or more frequently if required to determine if any events or circumstances exist, such as an adverse change in business climate or a decline in the overall industry demand, that would indicate that it would more likely than not reduce the fair value of a reporting unit below its carrying amount, including goodwill. If events or circumstances do not indicate that the fair value of a reporting unit is below its carrying amount, then goodwill is not considered to be impaired and no further testing is required. If further testing is required, we perform a two-step process. The first step involves comparing the fair value of its reporting unit to its carrying value, including goodwill. If the carrying value of the reporting unit exceeds its fair value, the second step of the test is performed by comparing the carrying value of the goodwill in the reporting unit to its implied fair value. An impairment charge is recognized for the excess of the carrying value of goodwill over its implied fair value. For the purpose of impairment testing, we have determined that we have one reporting unit. There was no impairment of goodwill for the period ended March 31, 2017.

Our long-lived assets, excluding goodwill, consist of property and equipment and intangible assets. We periodically review our long-lived assets for impairment. For assets to be held and used, we initiate our review whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be recoverable. Recoverability of an asset group is measured by comparison of its carrying amount to the expected future undiscounted cash flows that the asset group is expected to generate. If it is determined that an asset group is not recoverable, an impairment loss is recorded in the amount by which the carrying amount of the asset group exceeds its fair value. During the three months ended March 31, 2017, there was no impairment related to our long-lived assets.

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, 2017	2016
Revenues:		
Design-to-silicon-yield solutions	81 %	74 %
Gainshare performance incentives	19	26
Total revenues	100 %	100 %
Costs of design-to-silicon-yield solutions	47	40
Amortization of acquired technology	1	1
Total costs of Design-to-silicon-yield solutions	48	41
Gross profit	52	59
Operating expenses:		
Research and development	30	25
Selling, general and administrative	24	20
Amortization of other acquired intangible assets	1	1
Total operating expenses	55	46
Income (loss) from operations	(2)	13
Interest and other income (expense), net	(1)	(1)
Income (loss) before taxes	(3)	12
Income tax provision (benefit)	(5)	4
Net income	2 %	8 %

Comparison of the Three Months Ended March 31, 2017 and 2016

Revenues	**Three Months Ended March 31, 2017**	**2016**	**Change**	**% Change**
(in thousands, except for percentages)				
Design-to-silicon-yield solutions	$19,698	$18,578	$1,120	6 %
Gainshare performance incentives	4,591	6,503	(1,912)	(29)%
Total revenues	$24,289	$25,081	$(792)	(3)%

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 $1.1 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016, primarily due to an increase in the revenue from fixed fee integrated solutions, the result of more billable hours to revenue-generating projects in the period due to increased business activity, particularly in Asia, and an increase in the revenue from our Exensio big data solution. 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, 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 $1.9 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016. The decrease was primarily the result of lower gainshare from 28nm volumes, partially offset by higher gainshare from 14nm volumes, compared to the volumes from those nodes in the comparable period. 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 Gainshare performance incentives.

	Three Months Ended	**%**

Costs of Design-to-silicon-yield solutions	March 31, 2017	2016	Change	Change	
(in thousands, except for percentages)					
Direct costs of Design-to-silicon-yield solutions	$11,335	$10,110	$1,225	12	%
Amortization of acquired technology	96	96	-	-	%
Total costs of Design-to-silicon-yield solutions	$11,431	$10,206	$1,225	12	%

Costs of Design-to-silicon-yield solutions. Costs of Design-to-silicon-yield solutions consist of costs incurred to provide and support our services, costs recognized in connection with licensing our software, and amortization of acquired technology. Direct costs of Design-to-silicon-yield solutions consist of service and software licenses costs. Service 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 used by the Company in providing services to our customers in solution engagements, or sold in conjunction with our software products. Direct costs of Design-to-silicon-yield solutions increased $1.2 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016, primarily due to a $0.7 million increase in personnel-related cost driven by hiring in Asia and world-wide merit increases, a $0.2 million increase in subcontractor expense, a $0.3 million increase in depreciation expense of test equipment, and a $0.1 million increase in travel expense. Amortization of acquired technology for the three months ended March 31, 2017 and 2016 was due to the amortization of acquired technology from the Syntricity acquisition.

Research and Development	Three Months Ended March 31 2017	2016	Change	% Change	
(in thousands, except for percentages)					
Research and development	$7,282	$6,311	$ 971	15	%

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, facilities cost allocations, and stock-based compensation charges. Research and development expenses increased $1.0 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016, primarily due to a $0.3 million personnel-related expense due to higher headcount and world-wide merit increases, a $0.5 million increase in subcontractor expense, a $0.1 million increase in lab supplies, a $0.1 million increase in travel expense, and a $0.1 million increase in depreciation expense. The increased investment in research and development is primarily driven by continued development activity related to our DFI solution. 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 product development projects and revenue generating activity requirements.

Selling, General and Administrative	**Three Months Ended March 31, 2017**	**2016**	**$ Change**	**% Change**
(in thousands, except for percentages)				
Selling, general and administrative	$5,899	$5,124	$ 775	15 %

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 $0.8 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016, primarily due to a $0.2 million increase in personnel-related expense due to world-wide merit increases, a $0.1 million increase in facilities expense, a $0.2 million increase in subcontractor expense, and a $0.2 million increase in legal expense. 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.

Amortization of Other Acquired Intangible Assets. Amortization of other acquired intangible assets consists of amortization of intangibles acquired as a result of certain business combinations. The amortization of other acquired intangible assets for the three months ended March 31, 2017 decreased by $25,000 compared to the three months ended March 31, 2016, primarily the result of certain intangible assets becoming fully amortized.

Interest and Other Income (expense), net. Interest and other expense, net decreased by $6,000 for the three months ended March 31, 2017 compared to the three months ended March 31, 2016. The change was primarily due to foreign exchange rate movements.

Three Months Ended

Income Tax Provision (benefit)	March 31, 2017	2016	$ Change	% Change
(in thousands, except for percentages)				
Income tax provision (benefit)	$(1,162)	$1,026	$(2,188)	(213)%

Income Tax Provision (benefit). Income tax provision decreased $2.2 million for the three months ended March 31, 2017, compared to three months ended March 31, 2016, primarily due to the recognition of excess tax benefits related to employee stock compensation as a result of the adoption of ASU 2016-09 as well as the changes in unrecognized tax benefit.

Liquidity and Capital Resources

As of March 31, 2017, our working capital, defined as total current assets less total current liabilities, was $152.4 million, compared to $151.8 million as of December 31, 2016. Cash and cash equivalents were $114.9 million as of March 31, 2017, compared to $116.8 million as of December 31, 2016. As of March 31, 2017 and December 31, 2016, cash and cash equivalents held by our foreign subsidiaries were $3.7 million and $3.4 million, respectively. 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 the next twelve months.

During three months ended March 31, 2017, cash used in operating activities of $0.4 million was a result of $0.5 million of net income, non-cash adjustments to net income of $3.7 million and an increase in the net change in operating assets and liabilities of $4.6 million. Non-cash charges consisted primarily of stock-based compensation of $2.9 million, depreciation and amortization of $1.1 million, and amortization of acquired intangible assets of $0.2 million, partially offset by deferred taxes of $0.6 million. Cash flow decreases resulting from the net change in operating assets and liabilities primarily consisted of a $1.9 million increase in accounts receivable, mainly due to the timing of customer payments, a $1.4 million increase in prepaid expense and other current assets, a $1.0 million decrease in accrued compensation and related benefits, a $0.6 million of decrease in accrued and other liabilities, and a $2.0 million increase in other non-current assets, partially offset by a $0.5 million increase in accounts payable, a $1.7 million increase in deferred revenue, and a $0.1 million increase in billing in excess of recognized revenue. Cash flows used in investing activities of $2.3 million for the three months ended March 31, 2017, consisted of payments for capital expenditures, primarily test equipment. Cash flows provided by financing activities of $0.8 million for the three months ended March 31, 2017, consisted of $0.7 million of proceeds from the exercise of stock options and $0.9 million of proceeds from our Employee Stock Purchase Plan, offset by $0.8 million of cash payments for taxes related to net share settlement of equity awards.

During the three months ended March 31, 2016, cash generated from operating activities of $4.0 million was a result of $2.1 million of net income, non-cash adjustments to net income of $4.2 million and a decrease in the net change in operating assets and liabilities of $2.3 million. Non-cash charges consisted primarily of stock-based compensation of $2.7 million, deferred taxes of $0.5 million, depreciation and amortization of $0.8 million, amortization of acquired intangible assets of $0.2 million, and loss on disposal of property and equipment of $0.1 million. Cash flow decreases resulting from the net change in operating assets and liabilities primarily consisted of a $0.6 million decrease in accrued compensation and related benefits, $0.8 million decrease in accrued and other liability primarily due to payment of earn-out consideration related to Syntricity acquisition, a $1.2 million decrease in billing in excess of recognized revenue, and a $5.9 million increase in other non-current assets, offset by a $4.1 million decrease in accounts receivable, due to timing of customer payment, a $0.2 million decrease in prepaid expense and other current assets, a $0.3 million increase in accounts payable due to timing of payment of third party services, and a $1.7 million increase in deferred revenue. Cash flows used in investing activities of $1.8 million for the three months ended March 31, 2016, consisted of payments for capital expenditures, primarily test equipment. Cash flows provided by financing activities of $1.0 million for the three months ended March 31, 2016, primarily consisted of $0.2 million of proceeds from the exercise of stock options, $0.8 million of proceeds from our Employee Stock Purchase Plan.

Off-Balance Sheet Agreements

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

Contractual Obligations

The following table summarizes our known contractual obligations (in thousands) as of March 31, 2017:

Contractual Obligations	Payments Due by Period 2017 (remaining nine months)	2018	2019	2020	2021	2022 and thereafter	Total
Operating lease obligations	$1,434	$1,307	$439	$374	$291	$ 73	$3,918
Purchase obligations(1)	7,979	483	222	222	222	—	9,128
Total(2)	$9,413	$1,790	$661	$596	$513	$ 73	$13,046

(1) Purchase obligations consist of agreements to purchase goods and services entered in the ordinary course of business.

(2) The contractual obligation table above excludes liabilities for uncertain tax positions of $2.7 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, 2017, we had cash and cash equivalents of $114.9 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, 2017, 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, 2017, we had one outstanding forward contract with a notional amount of $7.2 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, 2017, in connection with the filing of this Quarterly Report on Form 10-Q. Based on that evaluation as of March 31, 2017, 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, 2017, 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 a party to any material legal proceedings, thus no loss was probable and no amount was accrued at March 31, 2017.

Item 1A. Risk Factors

Item 1A, “Risk Factors,” on pages 13 through 20 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2016, provides information on the significant risks associated with our business. There have been no subsequent material changes to these risks.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	Description
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.
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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 2, 2017 By: /s/ JOHN K. KIBARIAN
John K. Kibarian
President and Chief Executive Officer
(principal executive officer)

Date: May 2, 2017 By: /s/ GREGORY C. WALKER
Gregory C. Walker
Vice President, Finance and Chief Financial Officer
(principal financial and accounting officer)

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