Rubicon Technology, Inc.
Form 10-Q
November 09, 2016
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-Q

(Mark one)

Quarterly report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934 for the quarterly period ended September 30, 2016

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 001-33834

RUBICON TECHNOLOGY, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**36-4419301**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
900 East Green Street	
Bensenville, Illinois	**60106**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant s Telephone Number, Including Area Code: (847) 295-7000

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 Exchange 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 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

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

As of November 4, 2016 the Registrant had 26,828,821 shares of common stock, par value $0.001 per share, outstanding.

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RUBICON TECHNOLOGY, INC.

Quarterly Report on Form 10-Q

For the quarterly period ended September 30, 2016

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PART I FINANCIAL INFORMATION

ITEM 1. Consolidated Financial Statements
Rubicon Technology, Inc.

Consolidated balance sheets

	September 30, 2016 (unaudited)	December 31, 2015
	(in thousands, other than share data)	
Assets		
Cash and cash equivalents	$ 16,370	$ 21,216
Restricted cash	176	170
Short-term investments		8,895
Accounts receivable, net	1,978	1,738
Inventories	10,644	21,333
Other inventory supplies	5,124	5,717
Prepaid expenses and other current assets	356	1,188
Assets held for sale	1,329	
Total current assets	35,977	60,257
Property and equipment, net	41,119	57,569
Other assets	624	1,416
Total assets	$ 77,720	$ 119,242
Liabilities and stockholders equity		
Accounts payable	$ 2,263	$ 3,256
Accrued payroll	1,421	164
Accrued and other current liabilities	495	1,328
Corporate income and franchise taxes	166	207
Accrued real estate taxes	185	238
Short-term loan payable		1,500
Advance payments	460	9
Total current liabilities	4,990	6,702
Deferred tax liability		554
Total liabilities	4,990	7,256
Commitments and contingencies		

Stockholders equity		
Preferred stock, $0.001 par value, 5,000,000 undesignated shares authorized, no shares issued or outstanding		
Common stock, $0.001 par value, 40,000,000 shares authorized and 28,604,376 and 28,007,811 shares issued; 26,829,532 and 26,232,967 shares outstanding	29	28
Additional paid-in capital	374,642	373,565
Treasury stock, at cost, 1,774,844 shares	(12,148)	(12,148)
Accumulated other comprehensive loss	(26)	(33)
Accumulated deficit	(289,767)	(249,426)
Total stockholders equity	72,730	111,986
Total liabilities and stockholders equity	$ 77,720	$ 119,242

The accompanying notes are an integral part of these consolidated statements.

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Rubicon Technology, Inc.

Consolidated statements of operations

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
	(unaudited) (in thousands, other than share data)			
Revenue	$ 7,086	$ 5,346	$ 14,908	$ 21,362
Cost of goods sold	18,732	9,237	36,024	35,517
Gross loss	(11,646)	(3,891)	(21,116)	(14,155)
Operating expenses:				
General and administrative	1,709	3,037	6,171	7,293
Sales and marketing	395	287	1,147	979
Research and development	803	558	2,034	1,594
Loss on disposal of assets			126	22
Long-lived asset impairment charges	10,216	39,597	10,481	39,597
Loss from operations	(24,769)	(47,370)	(41,075)	(63,640)
Other income (expense):				
Interest income	9	15	52	52
Interest expense	(28)	(29)	(98)	(76)
Realized (loss) gain on foreign currency translation	(229)	(1,475)	237	(2,036)
Total other income (expense)	(248)	(1,489)	191	(2,060)
Loss before income taxes	(25,017)	(48,859)	(40,884)	(65,700)
Income tax benefit	216	663	541	576
Net loss	$ (24,801)	$ (48,196)	$ (40,343)	$ (65,124)
Net loss per common share				
Basic	$ (0.94)	$ (1.84)	$ (1.53)	$ (2.49)
Diluted	$ (0.94)	$ (1.84)	$ (1.53)	$ (2.49)
Weighted average common shares outstanding used in computing net loss per common share	26,374,516	26,160,308	26,374,516	26,143,948

The accompanying notes are an integral part of these consolidated statements.

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Rubicon Technology, Inc.

Consolidated statements of comprehensive loss

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
	(unaudited) (in thousands)			
Net loss	$ (24,801)	$ (48,196)	$ (40,343)	$ (65,124)
Other comprehensive income (loss):				
Unrealized gain on investments, net of tax		5	5	15
Unrealized gain (loss) on currency translation	(2)	2	2	1
Other comprehensive income (loss)	(2)	7	7	16
Comprehensive loss	$ (24,803)	$ (48,189)	$ (40,336)	$ (65,108)

The accompanying notes are an integral part of these consolidated statements.

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Rubicon Technology, Inc.

Consolidated statements of cash flows

	Nine months ended September 30,	
	2016	**2015**
	(unaudited) (in thousands)	
Cash flows from operating activities		
Net loss	$ (40,343)	$ (65,124)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	4,919	9,780
Net loss on disposal of assets	126	22
Long-lived asset impairment charges	10,481	39,597
Stock-based compensation	1,081	939
Deferred taxes	(554)	(584)
Changes in operating assets and liabilities:		
Accounts receivable	(240)	5,047
Inventories	5,067	(3,087)
Inventory reserves	5,964	910
Other inventory supplies	638	1,146
Prepaid expenses and other assets	1,638	304
Accounts payable	(1,045)	(910)
Accrued payroll	1,265	(296)
Corporate income and franchise taxes	(42)	(70)
Advanced payments	457	27
Accrued and other current liabilities	(891)	394
Net cash used in operating activities	(11,479)	(11,905)
Cash flows from investing activities		
Purchases of property and equipment	(595)	(801)
Proceeds from disposal of assets	190	
Purchases of investments	(24)	(3,099)
Proceeds from sale of investments	8,924	11,000
Net cash provided by investing activities	8,495	7,100
Cash flows from financing activities		
Net change in short-term borrowings	(1,500)	
Proceeds from exercise of options		4
Taxes paid related to net share settlement of equity awards	(1)	
Cash used to settle net equity awards		(8)
Restricted cash	(6)	16

Net cash (used in) provided by financing activities	(1,507)	12
Net effect of currency translation	(355)	1,868
Net decrease in cash and cash equivalents	(4,846)	(2,925)
Cash and cash equivalents, beginning of period	21,216	24,353
Cash and cash equivalents, end of period	$ 16,370	$ 21,428

The accompanying notes are an integral part of these consolidated statements.

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Rubicon Technology, Inc.

NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

September 30, 2016

1. BASIS OF PRESENTATION

Interim financial data

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (GAAP) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and notes required by GAAP for complete consolidated financial statements and should be read in conjunction with Rubicon Technology, Inc. s (the Company) annual report filed on Form 10-K, as amended, for the fiscal year ended December 31, 2015. In the opinion of management, all adjustments (consisting only of adjustments of a normal and recurring nature) considered necessary for a fair presentation of the results of operations have been included. Consolidated operating results for the three and nine months periods ended September 30, 2016 are not necessarily indicative of results that may be expected for the year ending December 31, 2016.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Rubicon Worldwide LLC, Rubicon Sapphire Technology (Malaysia) SDN BHD, Rubicon Technology Hong Kong Limited and Rubicon Technology Korea Yuhan Hosea. All intercompany transactions and balances have been eliminated in consolidation.

Foreign currency translation and transactions

Rubicon Worldwide LLC, Rubicon Technology Hong Kong Limited and Rubicon Technology Korea Yuhan Hosea s assets and liabilities are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates and capital accounts at historical exchange rates. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. Translation adjustments resulting from fluctuations in exchange rates for Rubicon Worldwide LLC, Rubicon Technology Hong Kong Limited and Rubicon Technology Korea Yuhan Hosea are recorded as a separate component of accumulated other comprehensive income (loss) within stockholders equity.

The Company has determined that the functional currency of Rubicon Sapphire Technology (Malaysia) SDN BHD is the U.S. dollar. Rubicon Sapphire Technology (Malaysia) SDN BHD s assets and liabilities are translated into U.S. dollars using the remeasurement method. Non-monetary assets are translated at historical exchange rates and monetary assets are translated at exchange rates existing at the respective balance sheet dates. Translation adjustments for Rubicon Sapphire Technology (Malaysia) SDN BHD are included in determining net income (loss) for the period. The results of operations are translated into U.S. dollars at the average exchange rates during the period. The Company records these gains and losses in other income (expense).

Foreign currency transaction gains and losses are generated from the effects of exchange rate changes on transactions denominated in a currency other than the functional currency of the Company, which is the U.S. dollar. Gains and

losses on foreign currency transactions are generally required to be recognized in the determination of net income (loss) for the period. The Company records these gains and losses in other income (expense).

Investments

The Company invests available cash primarily in investment grade commercial paper, certificates of deposit guaranteed by the Federal Deposit Insurance Corporation (the FDIC), corporate notes and government securities. Investments classified as available-for-sale securities are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in trading securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense), in the Consolidated Statement of Operations. Investments in which the Company has the ability and intent, if necessary, to liquidate in order to support its current operations, are classified as short-term.

The Company reviews its available-for-sale securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. The Company considers various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, its ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When the Company concludes that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the Consolidated Statement of Operations. As of September 30, 2016, no impairment was recorded.

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Accounts receivable

The majority of the Company s accounts receivable are due from manufacturers serving the light-emitting diode (LED) and optical systems and specialty electronics devices industries. Credit is extended based on an evaluation of the customer s financial condition. Accounts receivable are due based on contract terms and at stated amounts due from customers, net of an allowance for doubtful accounts.

Accounts outstanding longer than the contractual payment terms are considered past due. The Company determines its allowance for doubtful accounts by considering a number of factors, including the length of time a customer s balance is past due, the customer s current ability to pay and the condition of the general economy and industry as a whole. The Company writes off accounts receivable when they are deemed uncollectible, and payments subsequently received on such receivables are recorded as a reduction to bad debt expense. The following table shows the activity of the allowance for doubtful accounts:

	September 30, 2016	December 31, 2015
	(in thousands)	
Beginning balance	$ 389	$ 140
Net allowance adjustments	(245)	235
Accounts charged off, less recoveries	(61)	14
Ending balance	$ 83	$ 389

Inventories

Inventories are valued at the lower of cost or market. Raw materials cost is determined using the first-in, first-out method, and work-in-process and finished goods costs are determined on a weighted-average cost basis which includes materials, labor and overhead. The Company reduces the carrying value of its inventories for differences between the cost and the estimated net realizable value, taking into account usage, expected demand, technological obsolescence and other information.

At times in 2016 and 2015, the Company has accepted sales orders for core and wafer products at prices lower than cost. Based on these sales prices, the Company has recorded for the nine months ended September 30, 2016 and 2015, a lower of cost or market adjustment which reduced inventory and increased cost of goods sold by $1.1 million in each of those years.

The Company establishes inventory reserves when conditions exist that suggest inventory may be in excess of anticipated demand or is obsolete based on customer specifications. The Company evaluates the ability to realize the value of its inventory based on a combination of factors, including forecasted sales, estimated current and future market value and changes in customers product specifications. The Company s method of estimating excess and obsolete inventory has remained consistent for all periods presented.

The continual decline of prices and worldwide over supply of material has significantly limited the sales of the Company s two-inch diameter core. Therefore, two-inch diameter core is considered to be in excess. Since it can be recycled and used as raw material to grow new crystals, two-inch diameter core material has been written down to raw material value and for the three and nine months ended September 30, 2016, an excess and obsolete adjustment was

recorded which reduced inventory and increased cost of goods sold by $2.3 million.

On September 12, 2016, the Company announced plans to cease all production activities and shut down its Penang, Malaysia facility by the end of the year. The discontinuation of polished and patterned wafer production will result in a significant decrease in crystal growth production and thus impact the amount of raw material needed for future production. Accordingly, raw material in excess of the amount needed for future production has been written down and for the three and nine months ended September 30, 2016, an excess and obsolete adjustment was recorded which reduced inventory and increased cost of goods sold by $4.0 million.

Inventories are composed of the following:

	September 30, 2016	December 31, 2015
	(in thousands)	
Raw materials	$ 2,364	$ 7,346
Work-in-process	6,470	9,920
Finished goods	1,810	4,067
	$ 10,644	$ 21,333

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Property and equipment

Property and equipment consisted of the following:

	September 30, 2016	December 31, 2015
	(in thousands)	
Land and land improvements	$ 2,540	$ 4,133
Buildings	21,644	26,097
Machinery, equipment and tooling	43,275	50,364
Leasehold improvements	7,140	7,141
Furniture and fixtures	805	816
Information systems	1,115	1,105
Construction in progress	1,181	1,327
Total cost	77,700	90,983
Accumulated depreciation and amortization	(36,581)	(33,414)
Property and equipment, net	$ 41,119	$ 57,569

Revenue recognition

Revenue recognized includes product sales and billings for costs and fees for government contracts.

Product Sales

The Company recognizes revenue from product sales when earned. Revenue is recognized when, and if, evidence of an arrangement is obtained and the other criteria to support revenue recognition are met, including:

Persuasive evidence of an arrangement exists. The Company requires evidence of a purchase order with the customer indicating the terms and specifications of the product to be delivered, typically in the form of a signed quotation or purchase order from the customer.

Title has passed and the product has been delivered. Title passage and product delivery generally occur when the product is delivered to a common carrier.

The price is fixed or determinable. All terms are fixed in the signed quotation or purchase order received from the customer. Purchase orders do not contain rights of cancellation, return, exchange or refund.

Collection of the resulting receivable is reasonably assured. The Company s standard arrangement with customers includes payment terms. Customers are subject to the credit review process that evaluates each

customer s financial position and ability to pay. Collectability is determined by considering the length of time the customer has been in business and its history of collections. If it is determined that collection is not probable, no product is shipped and no revenue is recognized unless payment is received in advance.

Government Contracts

The Company recognizes research and development revenue in the period during which the related costs are incurred over the contractually defined period. In July 2012, the Company signed a contract with the Air Force Research Laboratory to produce large-area sapphire windows on a cost plus fixed fee basis. The Company records research and development revenue on a gross basis as costs are incurred, plus a portion of the fixed fee. For the three and nine months ended September 30, 2016, $80,000 and $289,000 of revenue from the contract was recorded, respectively, and for the three and nine months ended September 30, 2015, $270,000 and $556,000 of revenue from the contract was recorded, respectively. The total value of the contract is $4.7 million, of which $4.3 million has been recorded through September 30, 2016. For the three and nine months ended September 30, 2016, the Company recorded estimated costs expected to be incurred in excess of this contract value of $217,000.

The Company does not provide maintenance or other services and it does not have sales that involve multiple elements or deliverables.

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Net income per common share

Basic net income per common share is computed by dividing net income by the weighted-average number of common shares outstanding during the period. Diluted net income per common share is computed by dividing net income by the weighted-average number of diluted common shares outstanding during the period. Diluted shares outstanding are calculated by adding to the weighted-average shares any outstanding stock options and warrants based on the treasury stock method.

Diluted net loss per share is the same as basic net loss per share for the three and nine months ended September 30, 2016 because the effects of potentially dilutive securities are anti-dilutive.

As of September 30, 2016, diluted shares outstanding were the same as basic shares outstanding as the exercise price of outstanding stock options exceeded the weighted-average trading share price and there were no outstanding warrants.

At September 30, 2015, the Company had the following anti-dilutive securities outstanding which were excluded from the calculation of diluted net loss per share:

	September 30, 2015
Warrants	
Stock options	1,130
Total	1,130

Other comprehensive loss

Comprehensive loss is defined as the change in equity of a business enterprise from transactions and other events from non-owner sources. Comprehensive loss includes net earnings (loss) and other non-owner changes in equity that bypass the statement of operations and are reported in a separate component of equity. For the nine months ended September 30, 2016 and for the twelve months ended December 31, 2015, other comprehensive loss includes the unrealized loss on investments and foreign currency translation adjustments.

The following table summarizes the components of accumulated comprehensive loss:

	September 30, 2016	**December 31, 2015**
	(in thousands)	
Unrealized loss on investments	$ (12)	$ (17)
Unrealized loss on currency translation	(14)	(16)
Ending balance	$ (26)	$ (33)

Recent accounting pronouncements

In August 2014, the FASB issued ASU No. 2014-15 (ASU 2014-15), *Presentation of Financial Statements Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity s Ability to Continue as a Going Concern*. The standard requires management to evaluate whether there is substantial doubt about an entity s ability to continue as a going concern and to provide related footnote disclosures. Management must evaluate whether it is probable that known conditions or events, considered in the aggregate, would raise substantial doubt about the entity s ability to continue as a going concern within one year after the date that the financial statements are issued. If such conditions or events are identified, the standard requires management s mitigation plans to alleviate the doubt or a statement of the substantial doubt about the entity s ability to continue as a going concern to be disclosed in the financial statements. The standard is effective for fiscal years and interim periods beginning after December 15, 2016, with early adoption permitted. The Company is evaluating the impact, if any, of adopting ASU 2014-15 on its financial statements.

In July 2015, the FASB issued ASU No. 2015-11 (ASU 2015-11), *Inventory (Topic 330): Simplifying the Measurement of Inventory*. The amendments in this ASU require an entity to measure in-scope inventory at the lower of cost or net realizable value, further clarifying consideration for net realizable value as estimated selling prices in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. This ASU more closely aligns the measurement of inventory in GAAP with the measurement of inventory in International Financial Reporting Standards (IFRS). For public business entities, ASU 2015-11 is effective for annual periods and interim periods beginning after December 15, 2016. The amendments in this ASU are prospectively applied with early adoption permitted. The Company is evaluating this guidance and does not believe the adoption will significantly impact the presentation of its financial condition, results of operations and disclosures.

In January 2016, the FASB issued ASU No. 2016-01 (ASU 2016-01), *Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities.* The standard requires equity investments (except those accounted for under the equity method of accounting, or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income, requires public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes, requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset, and eliminates the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost. These changes become effective for fiscal years beginning after December 15, 2017. The Company is evaluating the impact, if any, of adopting ASU 2016-01 on its financial statements.

In February 2016, the FASB issued ASU No. 2016-02 (ASU 2016-02), *Leases (Topic 842)* which modifies the lease recognition requirements and requires entities to recognize the assets and liabilities arising from leases on the balance sheet. ASU 2016-02 requires entities to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018. Early adoption is permitted. The Company is evaluating the impact, if any, of adopting ASU 2016-02 on its financial statements.

In March 2016, the FASB issued ASU No. 2016-09 (ASU 2016-09), *Compensation Stock Compensation* (*Topic 718): Improvements to Employee Share-Based Payment Accounting* which modifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. ASU 2016-09 is effective for annual reporting periods beginning after December 15, 2016 with early adoption permitted. The Company is evaluating the impact, if any, of adopting ASU 2016-09 on its financial statements.

In April 2016, the FASB issued ASU No. 2016-10 (ASU 2016-10), *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing.* This update clarifies how an entity identifies performance obligations related to customer contracts as well as helps to improve the operability and understanding of the licensing implementation guidance. The amendments in this update affect the guidance in ASU No. 2014-09, (ASU 2014-09), *Revenue from Contracts with Customers (Topic 606),* which supersedes most of the current revenue recognition requirements. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. Other major provisions include capitalization of certain contract costs, consideration of time value of money in the transaction price, and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. The guidance also requires enhanced disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity s contracts with customers. The guidance is effective for the interim and annual periods beginning on or after December 15, 2017 (early adoption is not permitted). The guidance permits the use of either a retrospective or cumulative effect transition method. In May 2016, the FASB issued ASU No. 2016-12, (ASU 2016-12), *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients.* This update clarifies the objectives of collectability, sales and other taxes, noncash consideration, contract modifications at transition, completed contracts at transition and technical correction. The amendments in this update affect the guidance in ASU 2014-09. The Company is evaluating the impact, if any, of adopting ASU 2014-09 and its updates, ASU 2016-10 and ASU 2016-12, on its financial statements.

3. ASSET IMPAIRMENT CHARGES

When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, the Company performs an analysis to review the recoverability of the asset s carrying value. The Company makes estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. Any impairment losses are recorded as operating expenses, which reduce net income. In response to the Company s current period operating losses combined with its history of continuing operating losses, the Company evaluated the recoverability of certain property and equipment. In the third quarter of 2015, the overall outlook for the sapphire market continued to be volatile as industry analysts reported significant worldwide over capacity and pricing of sapphire products reached historical lows. Based upon the Company s assessment using its most recent projections, impairment to these assets was indicated as of September 30, 2015, as the recoverable amount of undiscounted cash flows did not exceed the carrying amount of these assets. For the three and nine months ended September 30, 2015, the Company recorded an asset impairment charge on machinery, equipment and facilities of $39.6 million. The Company evaluated its asset portfolio and wrote down the assets using a cost and market approach to determine the current fair market value.

With the announcement of the closing of the Malaysia facility, the Company engaged an independent valuation company to assist in the determination of the fair market value of certain of the assets. As it is the Company s intention to sell these assets, the Company evaluated its Malaysia asset portfolio other than the assets covered by a purchase agreement, based on assuming an orderly liquidation plan which considers economic obsolescence and sales of comparable equipment. Based on this review, the Company recorded for the three and nine months ended September 30, 2016, asset impairment charges on machinery, equipment and facilities of $10.2 million. At September 30, 2016, the Company reviewed the current fair market value of the U.S. assets and concluded no additional adjustments were needed except as noted below.

The Company is actively pursuing the sale of a parcel of extra land the Company owns in Batavia, Illinois. The property has a book value of $1.6 million and it is the Company s intention to complete a sale within the next twelve-month period. Therefore, this property was reclassified as a current asset held for sale at September 30, 2016. Since the expected sale price is below the book value of the property, for the nine months ended September 30, 2016, an impairment charge of $265,000 was recorded.

The Company will continue to assess its long-lived assets to ensure the carrying amount of these assets is still appropriate given any changes in the asset usage, marketplace and other factors used in determining the current fair market value.

4. SEGMENT INFORMATION

The Company evaluates operations as one reportable segment, as it only reports profit and loss information on an aggregate basis to its chief operating decision maker.

Revenue is attributed by geographic region based on ship-to location of the Company s customers. The following table summarizes revenue by geographic region:

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
	(in thousands)		(in thousands)	
Germany	$ 5,409	$ 1,629	$ 8,396	$ 3,270
United States	911	1,332	2,717	3,853
Korea	414	1,267	1,478	3,254
Canada	114		537	518
Australia	91	300	503	715
Israel	63	104	355	718
Taiwan	38	305	847	3,218
China	5	320	8	5,484
Other	41	89	67	332
Total revenue	$ 7,086	$ 5,346	$ 14,908	$ 21,362

The following table summarizes revenue by product type:

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
	(in thousands)		(in thousands)	
Core	$ 424	$ 1,824	$ 1,514	$ 10,962
Wafer	5,507	2,136	9,683	5,769
Optical	1,075	1,116	3,422	4,075
Research & development	80	270	289	556
Total revenue	$ 7,086	$ 5,346	$ 14,908	$ 21,362

The following table summarizes assets by geographic region:

	September 30, 2016	December 31, 2015
	(in thousands)	
United States	$ 61,148	$ 88,916
Malaysia	16,531	30,276
Other	41	50
Total assets	$ 77,720	$ 119,242

5. INVESTMENTS

The Company s investments are classified as available-for-sale securities and are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss).

The Company had no available-for-sale securities investments at September 30, 2016.

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The following table presents the amortized cost, and gross unrealized gains and losses on all securities at December 31, 2015:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
Short-term investments:				
FDIC guaranteed certificates of deposit	$ 1,920	$	$	$ 1,920
Corporate notes/bonds	6,980		5	6,975
Total short-term investments	$ 8,900	$	$ 5	$ 8,895

The Company values its investments at fair value, defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard below describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value, which are the following:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company s fixed income available-for-sale securities consist of high quality, investment grade commercial paper, corporate notes and government securities. The Company values these securities based on pricing from pricing vendors, who may use quoted prices in active markets for identical assets (Level 1 inputs) or inputs other than quoted prices that are observable either directly or indirectly (Level 2 inputs) in determining fair value. The valuation techniques used to measure the fair value of the Company s financial instruments having Level 2 inputs were derived from non-binding market consensus prices that are corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques.

The following table summarizes the Company s financial assets measured at fair value on a recurring basis as of September 30, 2016:

	Level 1	Level 2	Level 3	Total

	(in thousands)			
Cash equivalents:				
Money market funds	$ 10,943	$	$	$ 10,943

The following table summarizes the Company s financial assets measured at fair value on a recurring basis as of December 31, 2015:

	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents:				
Money market funds	$ 17,702	$	$	$ 17,702
Investments:				
Available-for-sales securities current:				
FDIC guaranteed certificates of deposit		1,920		1,920
Corporate notes/bonds		6,975		6,975
Total	$ 17,702	$ 8,895	$	$ 26,597

In addition to the debt securities noted above, the Company had approximately $5.4 million and $3.5 million of time deposits included in cash and cash equivalents as of September 30, 2016 and December 31, 2015, respectively.

6. SIGNIFICANT CUSTOMERS

For the three months ended September 30, 2016, the Company had one customer that accounted for approximately 76% of revenue. For the three months ended September 30, 2015, the Company had two customers individually that accounted for approximately 30% and 13% of revenue. For the nine months ended September 30, 2016, the Company had two customers individually that accounted for approximately 55% and 10% of revenue. For the nine months ended September 30, 2015, the Company had two customers individually that accounted for approximately 18% and 15% of revenue. No other customers accounted for more than 10% of revenue for these reported periods in 2016 and 2015.

Customers individually representing more than 10% of trade receivables accounted for approximately 64% and 57% of accounts receivable as of September 30, 2016 and December 31, 2015, respectively. The Company grants credit to customers based on an evaluation of their financial condition. Losses from credit sales are provided for in the financial statements.

7. STOCKHOLDERS EQUITY

Common Stock

As of September 30, 2016, the Company had reserved 3,067,034 shares of common stock for issuance upon the exercise of outstanding common stock options and the vesting of restricted stock units. Also, 2,125,676 shares of the Company s common stock were reserved for future grants of stock options (or other similar equity instruments) under the Rubicon Technology, Inc. 2016 Stock Incentive Plan (the 2016 Plan) as of September 30, 2016.

Warrants

For the three and nine months ended September 30, 2016, the Company had no common stock warrants outstanding.

8. STOCK INCENTIVE PLANS

The Company sponsored a stock option plan, the Rubicon Technology, Inc. 2001 Equity Plan, as amended (the 2001 Plan), which allowed for the granting of incentive and nonqualified stock options for the purchase of common stock. The maximum number of shares that could be awarded or sold under the 2001 Plan was 1,449,667 shares. Each option granted under the 2001 Plan entitles the holder to purchase one share of common stock at the specified option exercise price. The exercise price of each incentive stock option granted could not be less than the fair market value on the grant date. Management and the Board of Directors determined vesting periods and expiration dates at the time of the grant. On August 2, 2011, the 2001 Plan expired. Any existing options under the 2001 Plan remain outstanding in accordance with their current terms under the 2001 Plan.

In August 2007, the Company adopted the Rubicon Technology Inc. 2007 Stock Incentive Plan, which was amended and restated effective in March 2011 (the 2007 Plan), and which allowed for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards and bonus shares. The maximum number of shares that could be awarded under the 2007 Plan was 4,407,692 shares. Options granted under the 2007 Plan entitle the holder to purchase shares of the Company s common stock at the specified option exercise price, which could not be less than the fair market value of the common stock on the grant date. On June 24, 2016, the plan terminated with the adoption of the 2016 Plan. Any existing awards under the 2007 Plan remain outstanding in accordance with their current terms under the 2007 Plan.

On June 24, 2016, the Company stockholders approved adoption of the 2016 Plan effective as of March 17, 2016, which allows for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards and bonus shares. The Compensation Committee of the Company s Board of Directors administers the 2016 Plan. The committee determines the type of award to be granted, the fair market value, the number of shares covered by the award, and the time when the award vests and may be exercised.

Pursuant to the 2016 Plan, 2,229,803 shares of the Company s common stock plus any shares subject to outstanding awards under the 2007 Plan that subsequently expires unexercised, are forfeited without the delivery of shares or are settled in cash, will be available for issuance under the 2016 Plan. The 2016 Plan will automatically terminate on March 17, 2026, unless the Company terminates it sooner.

The Company uses the Black-Scholes option pricing model to value stock options issued after January 1, 2006. The Company uses a three-year historical stock price average to determine its volatility assumptions. The assumed risk-free rates were based on U.S. Treasury rates in effect at the time of grant with a term consistent with the expected option lives. The expected term is based upon the vesting term of the Company s options, a review of a peer group of companies, and expected exercise behavior. The forfeiture rate is based on past history of forfeited options. The expense is allocated using the straight-line method. For the three and nine months ended September 30, 2016, the Company recorded $147,800 and $460,000, respectively, of stock option compensation expense. For the three and nine months ended September 30, 2015, the Company recorded $173,000 and $558,000, respectively, of stock option compensation expense. As of September 30, 2016, the Company has $1.0 million of total unrecognized compensation cost related to non-vested awards granted under the Company s stock-based plans that it expects to recognize over a weighted-average period of 2.97 years.

The following table summarizes the activity of the stock incentive and equity plans as of September 30, 2016 and changes during the nine months then ended:

	Shares available for grant	Number of options outstanding	Weighted-average option exercise price	Number of restricted stock and board shares issued	Number of restricted stock units outstanding
At January 1, 2016	732,270	2,851,568	$ 7.07	201,455	454,021
Authorized	1,900,000				
Granted	(1,537,692)	943,620	0.63	594,072	
Exercised/Issued					(3,702)
Cancelled/forfeited	1,031,098	(1,012,821)	9.61		(165,652)
At September 30, 2016	2,125,676	2,782,367	$ 3.97	795,527	284,667

The Company s aggregate intrinsic value is calculated as the difference between the exercise price of the underlying stock options and the fair value of the Company s common stock. Based on the fair market value of the common stock at September 30, 2016 and 2015, there was no intrinsic value of the options outstanding and exercisable. The weighted average fair value per share of options granted for the nine months ended September 30, 2016 was $0.63 and the fair value of each option grant was estimated at the date of grant using the Black-Scholes option pricing model using an expected term of 5.1 years, risk-free interest rates of 1.24% - 1.73%, expected volatility of 65% and no dividend yield. The Company used an expected forfeiture rate of 23.1%.

A summary of the Company s non-vested options during the nine month period ended September 30, 2016 is presented below:

	Options	Weighted-average exercise price
Non-vested at January 1, 2016	1,251,961	$ 2.23
Granted	943,620	0.63
Vested	(189,800)	3.77
Forfeited	(215,065)	2.63
Non-vested at September 30, 2016	1,790,716	$ 1.18

For the three and nine months ended September 30, 2016, the Company recorded $48,600 and $187,000, respectively, of restricted stock unit (RSU) expense. As of September 30, 2016, there was $290,000 of unrecognized compensation cost related to the non-vested RSUs. This cost is expected to be recognized over a weighted-average period of 1.78 years.

A summary of the Company s restricted stock units is as follows:

	RSUs outstanding	Weighted average price at time of grant	Aggregate intrinsic value
Non-vested restricted stock units as of January 1, 2016	454,021	$ 1.92	
Granted			
Vested	(3,702)	3.94	
Cancelled	(165,652)	2.46	
Non-vested at September 30, 2016	284,667	$ 1.58	$ 179,340

For the three and nine months ended September 30, 2016, the Company recorded $153,000 and $434,000, respectively, of stock compensation expense related to restricted stock. For the three and nine months ended September 30, 2015, the Company recorded $74,000 and $220,000, respectively, of stock compensation expense related to restricted stock.

An analysis of restricted stock issued is as follows:

Non-vested restricted stock as of January 1, 2016	15,200
Granted	594,072
Vested	(278,011)
Non-vested restricted stock as of September 30, 2016	331,261

9. COMMITMENTS AND CONTINGENCIES

Purchase Commitments

The Company has entered into agreements for electricity and for equipment for new products. These agreements will result in the Company purchasing electricity or equipment for a total cost of approximately $1.8 million with deliveries occurring through December 2017.

Litigation

From time to time, the Company experiences routine litigation in the normal course of its business. The management of the Company does not believe any pending litigation, other than as set forth below, will have a material adverse effect on the financial condition or results of operations of the Company.

On April 30, 2015, Firerock Global Opportunity Fund LP filed a complaint in the Northern District of Illinois asserting federal securities claims against the Company, certain officers, its directors and the underwriters in the Company s March 2014 stock offering. The complaint sought as a remedy either money damages or rescission of the March 2014 offering, plus attorneys fees. On October 29, 2015, after mediation and subsequent discussions, the parties reached a settlement agreement in principle. On January 27, 2016, the United States District Court for the Northern District of Illinois granted a motion for preliminary approval of the agreement, and on May 20, 2016, a final judgment and order of dismissal was granted. The settlement included a release of all defendants, and dismissal of the case against all defendants with prejudice. The Company recorded for the year ended December 31, 2015 an expense of $1.1 million of which $900,000 is the amount the Company contributed to the settlement and paid on February 17, 2016. The remaining costs of the settlement were covered by the Company s insurance carriers.

On November 19, 2015, the Carolyn Piper Smithhisler Living Trust, derivatively on behalf of Rubicon Technology Inc., filed a complaint in the Eighteenth Judicial Circuit of Illinois against the Company s Board of Directors and certain senior officers seeking to remedy alleged breaches of fiduciary duties and other violations of the law, failure to implement an effective system of internal controls, and failure to oversee the public statements made by the Company and certain individual defendants. The complaint sought as a remedy to recover damages against the individual defendants for the benefit of the Company and to require the Company to reform and improve its corporate governance and internal procedures plus attorneys fees. After extensive discussions, the parties informed the court on May 2, 2016 that they had reached a settlement agreement in principle. The proposed settlement provides for the Company to adopt certain governance changes and to pay certain amounts. On May 23, 2016, the court issued an order granting preliminary approval of the proposed settlement. On July 11, 2016, plaintiff s unopposed motion for final approval of stockholder derivative settlement fee and expense amount and service award was filed. On August 1, 2016, the court issued a final judgment approving the settlement and an order of dismissal was granted. The Company s insurance carriers are expected to cover substantially all of the settlement payments and related expenses, including legal fees.

10. INCOME TAXES

The Company is subject to income taxes in the U.S. and Malaysia. On a quarterly basis, the Company assesses the recoverability of deferred tax assets and the need for a valuation allowance. Such evaluations involve the application of significant judgment and multiple factors, both positive and negative, are considered. For the period ended September 30, 2016, a valuation allowance has been included in the 2016 forecasted effective tax rate. The Company is in a cumulative loss position for the past three years, which is considered significant negative evidence that is difficult to overcome on a more likely than not standard through objectively verifiable data. Under the accounting

standards objective verifiable evidence is given greater weight than subjective evidence such as the Company s projections for future growth. Based on an evaluation in accordance with the accounting standards, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all the available evidence. At September 30, 2016, the Company continues to be in a three-year cumulative loss position; therefore, until an appropriate level of profitability is attained, the Company expects to maintain a full valuation allowance on its U.S. and Malaysia net deferred tax assets. Any U.S. and Malaysia tax benefits or tax expense recorded on the Company s Consolidated Statement of Operations will be offset with a corresponding valuation allowance until such time that the Company changes its determination related to the realization of deferred tax assets. In the event that the Company changes its determination as to the amount of deferred tax assets that can be realized, the Company will adjust its valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

The tax provision for the three and nine months ended September 30, 2016 is based on an estimated combined statutory effective tax rate. The Company recorded for the three and nine months ended September 30, 2016 a tax benefit of $216,000 and $541,000, respectively, for an effective tax rate of 0.86% and 1.3%, respectively. For the three and nine months ended September 30, 2016, the difference between the Company s effective tax rate and the U.S. federal 35% statutory rate and state 6.2% (net of federal benefit) statutory rate was primarily related to U.S. and Malaysia valuation allowances and Malaysia foreign tax rate differential.

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11. CREDIT FACILITY

On January 2, 2013, the Company entered into a three-year term agreement with a bank to provide the Company with a senior secured credit facility of up to $25.0 million. The agreement provided for the Company to borrow up to 80% of eligible accounts receivable and up to 35% of domestically held raw material and finished goods inventory. Advances against inventory were limited to 40% of the aggregate outstanding on the revolving line of credit and $10.0 million in aggregate. The Company had the option to borrow at an interest rate of LIBOR plus 2.75% or the Wall Street Journal prime rate plus 0.50%. If the Company maintained liquidity of $20.0 million or greater with the lending institution, then the borrowing interest rate options were LIBOR plus 2.25% or the Wall Street Journal prime rate. There was an unused revolving line facility fee of 0.375% per annum. The facility was secured by a first priority interest in substantially all of the Company s personal property, excluding intellectual property. The Company was required to maintain an adjusted quick ratio of 1.40 to 1.00, maintain operating and other deposit accounts with the bank or bank s affiliates of 25% of the Company s total worldwide cash, securities and investments, and the Company could pay dividends or repurchase capital stock only with the bank s consent during the three-year term. In August 2015, the Company entered into an amended agreement with the bank to extend the senior secured facility through January 2, 2018. Under the amended agreement, advances against inventory were limited to the lesser of 45% of the aggregate outstanding principal on the revolving line of credit and $10.0 million and the rate on the facility fee on the unused portion of the revolving line was adjusted to 0.50% per annum. All other terms and conditions remained the same. The agreement contained a subjective acceleration clause and required the Company to maintain a lockbox. As a result, the Company classified the debt as a current liability on its balance sheet.

On September 9, 2016, the Company voluntarily terminated the loan agreement. Pursuant to the pay-off letter for termination of the loan agreement, upon payment of the pay-off amount, all obligations under the loan agreement were paid and discharged in full, all unfunded commitments by the bank to make credit extensions to the Company under the loan agreement were terminated, all security interests granted to or held by the bank under the loan agreement were released, and all guaranties supporting the loan agreement were released. The Company did not incur any early termination penalties in connection with the termination.

For the three and nine months ended September 30, 2016, the Company recorded interest expense of $27,500 and $98,200, respectively, related to the credit facility which includes $24,200 and $87,000, respectively, of interest expense charged on the unused portion of the facility. For the nine months ended September 30, 2015, the Company did not draw on this facility. For the three and nine months ended September 30, 2015, the Company recorded $29,000 and $76,000, respectively, of interest expense charged on the unused portion of the facility.

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ITEM 2. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

All statements, other than statements of historical facts, included in this Quarterly Report on Form 10-Q, including statements regarding our estimates, expectations, beliefs, intentions, projections or strategies for the future, results of operations, financial position, net sales, projected costs, prospects and plans and objectives of management for future operations may be forward-looking statements within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. These forward looking statements can be identified by the use of terms and phrases such as believe, plan, intend, anticipate, target, estimate, expect, forecast, prospects, goals, potential, likely, an future-tense or conditional constructions such as will, may, could, should, etc. (or the negative thereof). Items contemplating or making assumptions about actual or potential future sales, market size and trends or operating results also constitute forward-looking statements.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Before investing in our common stock, investors should be aware that the occurrence of the risks, uncertainties and events described in the section entitled Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2015, as amended, in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016 and elsewhere in this Quarterly Report, could have a material adverse effect on our business, results of operations and financial condition.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, forward-looking statements are inherently subject to known and unknown business, economic and other risks and uncertainties that may cause actual results to be materially different from those discussed in these forward-looking statements. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Quarterly Report. We assume no obligation to update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Quarterly Report, other than as may be required by applicable law or regulation. If one or more of these risks or uncertainties materialize, or if the underlying assumptions prove incorrect, our actual results may vary materially from those expected or projected.

You should read this Quarterly Report, the documents that we reference in this Quarterly Report and have filed with the SEC as exhibits and our Annual Report on Form 10-K, as amended, for the year ended December 31, 2015 with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Unless otherwise indicated, the terms Rubicon, the Company, we, us, and our refer to Rubicon Technology, Inc. our consolidated subsidiaries.

OVERVIEW

We are a vertically integrated, advanced materials provider specializing in monocrystalline sapphire for applications in optical and industrial systems. We apply our proprietary crystal growth technology to produce high-quality sapphire products to meet our customers exacting specifications. Historically, we have also provided sapphire products to the LED and mobile device markets, which are the largest markets for sapphire. However, given competitive pressures in those markets, we have recently decided to limit our focus in the near-term to the optical and industrial sapphire

markets. While these are smaller markets, we believe that due to more challenging customer requirements, competition is more limited and margin opportunities are greater. We provide optical and industrial sapphire products in various shapes and sizes, including round and rectangular windows and blanks, domes, tubes and rods. These optical sapphire products are used in equipment for a wide variety of end markets, including defense and aerospace, medical devices, oil and gas drilling, semiconductor manufacturing and other markets. We believe our high quality crystal, strong and developing U.S. customer base, and optical finishing capability are strong differentiators in the optical and industrial sapphire markets, and we believe there are emerging applications in these markets that could drive revenue and margin growth in coming years.

The LED and mobile device markets for sapphire have attracted significant investment in sapphire production in China, which has resulted in oversupply and low pricing. We had been trying to stay in the LED substrate market by limiting our product offering to six-inch diameter wafers and working hard to reduce cost to make this product profitable. While we made significant progress on that front, the continual decline of prices made the prospects of becoming profitable in the LED substrate market unlikely for the foreseeable future. As a result, we recently made the decision to limit our focus to the optical and industrial sapphire markets and exit the LED and mobile device markets.

We announced on September 12, 2016 our plan to cease all production activities and shut down our Penang, Malaysia facility. Production activities at the Malaysia facility are expected to cease by November 30, 2016, with the shutdown of the facility to be completed by December 31, 2016. Our Malaysia facility has been primarily engaged in producing polished and patterned substrates for the LED market. We are reviewing and pursuing options to market for sale the facility and equipment in Malaysia. To that end, during the quarter ended September 30, 2016, we entered into an agreement for the sale of our patterned sapphire substrate (PSS) equipment and related spare parts and consumables to a wafer customer for a purchase price of $4.5 million. Under the sales agreement terms we are to provide documentation and training on the operation of the equipment. Also a condition to closing under the sales agreement was a ramp down production commitment to supply a minimum of 20,000 polished wafers with delivery by November 30, 2016 at a separately agreed to price. During the quarter ended September 30, 2016, we received a deposit in the amount of $450,000 under this agreement. The transaction will close in the fourth quarter of 2016. Separately it was agreed that by the end of September, all consignment inventory on hand with the wafer customer would be drawn on and substantially all of their outstanding accounts receivable balance would be paid. Included in wafer revenue for the three and nine months ended September 30, 2016, was $3.0 million of revenue related to this draw and $3.2 million was received in September against the outstanding receivable balance.

In the quarter ended September 30, 2016, we recorded an impairment charge of $10.2 million related to our building and remaining equipment in Malaysia. We engaged an independent valuation company to determine the fair market value of these assets in Malaysia based on assuming an orderly liquidation plan which considers economic obsolescence and sales of comparable equipment. The valuation was prepared using various valuation techniques and was not based on an agreed to sale price. As such, it is difficult to predict the amount of proceeds we will receive in the sale of the building and remaining equipment in Malaysia or if there will be additional charges recorded as a result of those asset sales.

Historically, we sold sapphire cores into the mobile device market and sapphire cores and wafers into the LED market. Once our Malaysia facility ceases production activities, which is expected by the end of November of this year, our LED-related production activities will cease and our LED revenue will significantly decrease beginning in the fourth quarter of 2016 and into future periods. At that point, our sales will be almost exclusively from optical and industrial sapphire components. The following table summarizes optical revenue for each of the last three years:

Year ended December 31,	Optical revenue (in thousands)	% of total revenue
2015	$5,086	21%
2014	$7,057	15%
2013	$4,523	11%

We operate in an extremely volatile market, so our ability to expand our optical and industrial business and acceptance of new product offerings is difficult to predict.

With our decision to exit from the LED and mobile device segments of the sapphire market, we have excess crystal growth capacity in the U.S. We plan to use crystal in inventory in the near-term and outsource certain finishing steps to third parties to reduce product costs and improve cash flow. We are also developing a plan to scale down our remaining operations and sell additional assets that would not be needed as we focus on the optical and industrial sapphire markets. In this regard, we are in the process of consolidating our U.S. operations into our leased space in Bensenville, Illinois and Franklin Park, Illinois and vacating our largest facility in Batavia, Illinois, which we own. We are targeting December 31, 2016 for completion of the relocation to Bensenville and Franklin Park and are

considering the sale of the Batavia plant once the relocation is complete. The Batavia plant is a special purpose facility with extensive enhancements to power and water cooling systems required for crystal growth production. Our initial focus would be to seek a buyer that is interested in both the building and infrastructure. We are also in the process of seeking buyers for some of our crystal growth furnaces.

We recognize research and development revenue in the period during which the related costs and fees are incurred.

Historically, a significant portion of our revenue has been derived from sales to relatively few customers. For the three months ended September 30, 2016, we had one customer that accounted for approximately 76% of revenue and for the three months ended September 30, 2015, we had two customers individually that accounted for approximately 30% and 13% of revenue. For the nine months ended September 30, 2016, we had two customers individually that accounted for approximately 55% and 10% of revenue. For the nine months ended September 30, 2015, we had two customers individually that accounted for approximately 18% and 15% of revenue. Other than as discussed above, none of our customers accounted for more than 10% of our revenue for such periods.

Our revenue from the optical and industrial markets also tends to be concentrated. For the three months ended September 30, 2016, we had four customers individually that accounted for approximately 15%, 13%, 11% and 11% of optical revenue and for the three months ended September 30, 2015, we had four customers individually that accounted for approximately 18%, 14%, 12% and 11% of optical revenue. For the nine months ended September 30, 2016, we had three customers that accounted for approximately 16%, 13% and 10% of optical revenue. For the nine months ended September 30, 2015, we had three customers individually that accounted for approximately 18%, 16% and 13% of optical revenue. We expect our revenue to continue to be concentrated among a small number of customers. We expect that our significant customers may change from period to period.

We recognize revenue based upon shipping terms with our customers and from our government contract as costs and fees are incurred. Delays in product orders or changes to the timing of shipments could cause our quarterly revenue to vary significantly. We derive a significant portion of our revenue from customers outside of the U.S. Historically, the majority of our sales have been to customers located in Asia; with our shift in focus to the optical and industrial markets, we expect the majority of our sales to be in the U.S. All of our revenue and corresponding accounts receivable are denominated in U.S. dollars.

We currently manufacture and ship our products from our facilities in the Chicago metropolitan area and from our facility in Penang, Malaysia. We have approximately 226,400 square feet of manufacturing and office space in Batavia, Franklin Park and Bensenville, Illinois, and a 65,000 square foot facility in Penang, Malaysia. The Malaysia facility is expected to cease production activities by the end of November of this year and will be held for sale. In March 2012, we acquired additional land in Batavia, Illinois to expand our crystal growth capacity, though that land is now being offered for sale.

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Our cost of goods sold consists primarily of manufacturing materials, labor, manufacturing-related overhead such as utilities, depreciation and rent, provisions for excess and obsolete inventory reserves, freight and warranties. We purchase materials and supplies to support such current and future demand. We are subject to variations in the cost of raw materials and consumables from period to period because we do not have long-term fixed-price agreements with most of our suppliers.

Our operating expenses are comprised of sales and marketing, research and development (R&D), and general and administrative (G&A) expenses. G&A expenses consist primarily of compensation and associated costs for employees in finance, human resources, information technology and administrative activities, charges for accounting, legal, and insurance fees, and stock-based compensation. The majority of our stock-based compensation relates to administrative personnel and is accounted for as a G&A expense.

Other income (expense) consists of interest income, interest expense and realized gains and losses on investments and currency translation.

We account for income taxes under the asset and liability method whereby the expected future tax consequences of temporary differences between the book value and the tax basis of assets and liabilities are recognized as deferred tax assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to be recognized. Our analysis of ownership changes that limit the utilization of our net operating loss (NOL) carryforwards as of September 30, 2016, shows no impact on such utilization. We are in a cumulative loss position for the past three years, which is considered significant negative evidence that is difficult to overcome on a more likely than not standard through objectively verifiable data. Based on an evaluation in accordance with the accounting standards, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all the available evidence. At September 30, 2016, we continue to be in a three-year cumulative loss position; therefore, a full valuation allowance was provided on our U.S. and Malaysia net deferred tax assets and no tax benefit will be recorded until we can conclude that it is more likely than not that our deferred tax assets will be realized.

We plan to limit our capital expenditures to only those required under existing obligations or as otherwise necessary to realize value from the development, commercialization or sale of products. Our capital expenditures in the nine months ended September 30, 2016 were $595,000.

We continue to review a variety of alternatives with a goal of providing greater value to our stockholders. These alternatives could result in, among other things, further modifying or eliminating certain of our operations, selling material assets or business segments, seeking additional financing, a sale of the business, a merger, consolidation or other business combination, partnering or other collaboration agreements, potential acquisitions or recapitalizations, or we may continue to operate with our current business plan and strategy. We cannot provide assurance that this process will result in the consummation of any transaction, or that the consummation of any transaction will provide greater value to our stockholders.

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RESULTS OF CONSOLIDATED OPERATIONS THREE MONTHS ENDED SEPTEMBER 30, 2016 AND 2015

The following table sets forth our consolidated statements of operations for the periods indicated:

	Three months ended September 30,	
	2016	2015
	(in millions)	
Revenue	$ 7.1	$ 5.3
Cost of goods sold	18.8	9.2
Gross loss	(11.7)	(3.9)
Operating expenses:		
General and administrative	1.7	3.0
Sales and marketing	0.4	0.3
Research and development	0.8	0.5
Long-lived asset impairment charges	10.2	39.6
Total operating expenses	13.1	43.4
Loss from operations	(24.8)	(47.3)
Other expense	(0.2)	(1.5)
Loss before income taxes	(25.0)	(48.8)
Income tax benefit	0.2	0.6
Net loss	$ (24.8)	$ (48.2)

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The following table sets forth our consolidated statements of operations as a percentage of revenue for the periods indicated:

	Three months ended September 30,	
	2016	2015
	(percentage of total)	
Revenue	100%	100%
Cost of goods sold	265	174
Gross loss	(165)	(74)
Operating expenses:		
General and administrative	24	56
Sales and marketing	6	5
Research and development	11	10
Long-lived asset impairment charges	143	741
Total operating expenses	184	812
Loss from operations	(349)	(886)
Other expense	(3)	(28)
Loss before income taxes	(352)	(914)
Income tax benefit	3	12
Net loss	(349)%	(902)%

Revenue. Revenue was $7.1 million and $5.3 million for the three months ended September 30, 2016 and 2015, respectively, an increase of $1.8 million. We experienced lower revenue from sales of our core products by $1.4 million, of which $1.0 million was attributable to a decrease in volume and $378,000 was attributable to a decrease in price. Revenue from sales of large-diameter polished and patterned wafers has increased by $3.4 million, of which $6.0 million was attributable to an increase in volume, partially offset by $2.6 million attributable to a decrease in price. This was driven primarily by the full draw of consignment inventories by our largest LED customer. Increase in revenue from sales to the LED market was partially offset by a decrease in revenue from sales to the Silicon on Sapphire (SoS) market of $209,000. Revenue of $1.1 million from optical products was unchanged. As we are nearing the completion of our government contract, we have experienced a decrease of $190,000 in the R&D revenue attributable to this contract. Pricing for LED sapphire products has continued to decline throughout the previous and current year. The continual decline of prices has made the prospects of becoming profitable in the LED substrate market unlikely in the foreseeable future. As a result, we have decided to focus on the optical and industrial sapphire markets at this time. We will cease all LED-related production activities and will close our Penang, Malaysia manufacturing facility by December 31, 2016, which will significantly decrease future LED revenue. We will continue to build a business more focused on the optical and industrial sapphire markets, where we believe we have greater differentiation from our competitors. We believe there are emerging applications in that market which will drive revenue growth in the coming years. We operate in an extremely volatile market, so our ability to expand our optical and industrial business and acceptance of new product offerings is difficult to predict.

Gross loss. Gross loss was $11.7 million and $3.9 million for the three months ended September 30, 2016 and 2015, respectively, an increase in gross loss of $7.8 million. The increase in gross loss was primarily attributable to charges incurred in connection with our decision to exit the LED market and close our Malaysia facility including an excess raw material inventory write-down of $4.0 million, severance expense of $793,000 and consumable stock write-off expense of $534,000. In addition, we recorded a write-down of $2.3 million for excess two-inch core inventory and severance expense of $180,000 for the reduction in staffing in the U.S.

General and administrative expenses. G&A expenses were $1.7 million and $3.0 million for the three months ended September 30, 2016 and 2015, respectively, a decrease of $1.3 million. The decrease is attributable to a $889,000 decrease in legal costs, as costs in 2015 included a $900,000 legal settlement expense, a decrease in bad debt expense of $247,000 on improved collections, a decrease of $89,000 in information technology related costs, lower employee compensation costs of $87,000 which is net of a $129,000 severance accrual on lower headcount and a decrease in recruiting costs of $86,000.

Sales and marketing expenses. Sales and marketing expenses were $395,000 and $287,000 for the three months ended September 30, 2016 and 2015, respectively, an increase of $109,000. The increase in sales and marketing expenses was primarily attributable to increased employee compensation and benefit costs of $98,000, and an increase in cost of sales and marketing exhibitions and samples of $11,000 related to our increased sales effort in the optical and industrial sapphire markets.

Research and development expenses. R&D expenses were $803,000 and $558,000 for the three months ended September 30, 2016 and 2015, respectively, an increase of $245,000. The increase was primarily attributable to the recognition of the estimated costs of $217,000 on the government contract in excess of the contract value, an increase of $58,000 in project expenses, increased employee compensation of $41,000 on increased headcount, partially offset by a $42,000 decrease in employee travel and a decrease of $29,000 in depreciation on R&D equipment.

Long-lived asset impairment charge. When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, we perform an analysis to review the recoverability of the asset s carrying value. We make estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. The estimated fair value of assets is determined using appraisal techniques which assume the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. Any impairment losses are recorded as operating expenses, which reduce net income. In response to our current period operating losses combined with our history of continuing operating losses, we evaluate the recoverability of certain property and equipment.

At September 30, 2015, the overall outlook for the sapphire market continued to be volatile as industry analysts reported significant worldwide over-capacity and pricing of sapphire products reached historical lows. Based on our assessment using our most recent projections, impairment to these assets was indicated as of September 30, 2015, as the recoverable amount of undiscounted cash flows did not exceed the carrying amount of these assets. For the three months ended September 30, 2015, we recorded an asset impairment charge on machinery, equipment and facilities of $39.6 million using a cost and market approach to determine the current fair market value.

With the announcement of the closing of the Malaysia facility, we engaged an independent valuation company to assist in the determination of the fair market value of certain of the assets. We evaluated our Malaysia asset portfolio (other than the assets covered by the aforementioned purchase agreement) based on assuming an orderly liquidation plan which considers economic obsolescence and sales of comparable equipment rather than a cost and market approach as it is our intention to sell these assets. Based on this review we recorded for the three months ended September 30, 2016 an asset impairment charge on machinery, equipment and facilities of $10.2 million.

At September 30, 2016, we reviewed the current fair market value of the U.S. assets and based on a cost and market approach concluded for the three months ended September 30, 2016 that no additional adjustments were needed. While we are considering the sale of certain U.S. based assets, a decision has not yet been made. If those assets are to be sold, they will be re-valued based on liquidation value at that time.

Other income (expense). Other expense was $248,000 and $1.5 million for the three months ended September 30, 2016 and 2015, respectively, a decrease of $1.2 million primarily attributable to a decrease in realized loss on foreign currency translation.

Income tax benefit. In accordance with ASC740 Accounting for Income Taxes (ASC740), we evaluate our deferred income tax assets quarterly to determine if valuation allowances are required or should be adjusted. ASC740 requires that companies assess whether valuation allowances should be established against their deferred tax assets based on consideration of all available evidence, both positive and negative, using a more likely than not standard. We are in a cumulative loss position for the past three years, which is considered significant negative evidence by the accounting standards that is difficult to overcome on a more likely than not standard through objectively verifiable data. The accounting standards attribute greater weight to objective negative evidence than to subjective positive evidence, such as our projections for future growth. Based on this evaluation, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all the available evidence. At September 30, 2016 we continue to be in a three-year cumulative loss position; therefore, until an appropriate level of profitability is attained, we expect to maintain a valuation allowance on net deferred tax assets related to future U.S. and Malaysia tax

benefits and will no longer accrue tax benefits or tax expense on our Consolidated Statement of Operations. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made. The tax provision for the three months ended September 30, 2016 is based on an estimated combined statutory effective tax rate. For the three months ended September 30, 2016, the difference between our effective tax rate of 0.86% and the U.S. federal 35% statutory rate and state 6.2% (net of federal benefit) statutory rate was primarily related to U.S. and Malaysia valuation allowances and Malaysia foreign tax rate differential.

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RESULTS OF CONSOLIDATED OPERATIONS NINE MONTHS ENDED SEPTEMBER 30, 2016 AND 2015

The following table sets forth our consolidated statements of operations for the periods indicated:

	Nine months ended September 30,	
	2016	2015
	(in millions)	
Revenue	$ 14.9	$ 21.4
Cost of goods sold	36.0	35.5
Gross loss	(21.1)	(14.1)
Operating expenses:		
General and administrative	6.2	7.3
Sales and marketing	1.2	1.0
Research and development	2.0	1.6
Loss on disposal of assets	0.1	
Long-lived asset impairment charges	10.5	39.6
Total operating expenses	20.0	49.5
Loss from operations	(41.1)	(63.6)
Other income (expense)	0.2	(2.1)
Loss before income taxes	(40.9)	(65.7)
Income tax benefit	0.6	0.6
Net loss	$ (40.3)	$ (65.1)

The following table sets forth our consolidated statements of operations as a percentage of revenue for the periods indicated:

	Nine months ended September 30,	
	2016	2015
	(percentage of total)	
Revenue	100%	100%
Cost of goods sold	242	166
Gross loss	(142)	(66)
Operating expenses:		
General and administrative	42	35

Sales and marketing	8	5
Research and development	13	7
Loss on disposal of assets	1	
Long-lived asset impairment charges	70	185
Total operating expenses	134	232
Loss from operations	(276)	(298)
Other income (expense)	2	(10)
Loss before income taxes	(274)	(308)
Income tax benefit	4	3
Net loss	(270)%	(305)%

Revenue. Revenue was $14.9 million and $21.4 million for the nine months ended September 30, 2016 and 2015, respectively, a decrease of $6.5 million. We experienced lower revenue from sales of our core products by $9.5 million, of which $7.7 million was attributable to a decrease in volume and $1.8 million was attributable to a decrease in price. Revenue from sales of large-diameter polished and patterned wafers increased by $3.9 million, of which $8.3 million was attributable to an increase in volume, partially offset by $4.4 million attributable to a decrease in price. Increase in wafer revenue of $4.7 million from sales to LED market was partially offset by a decrease in revenue from sales to the SoS market of $833,000. This was driven primarily by the full draw of consignment inventories by our largest LED customer. Revenue from optical products decreased by $636,000 due to increased competition in the period for certain products with looser specifications. As we are nearing the completion of our government contract, we have experienced a decrease of $267,000 in the R&D revenue attributable to this contract. The continual decline of prices has made the prospects of becoming profitable in the LED substrate market unlikely in the foreseeable future. As a result, we have decided to focus on the optical and industrial sapphire markets at this time. We will cease all LED-related production activities and will close our Penang, Malaysia manufacturing facility by December 31, 2016 which will significantly decrease future LED revenue. We will continue to build a business more focused on the optical and industrial sapphire markets, where we believe we have greater differentiation from our competitors. We believe there are emerging applications in that market which will drive revenue growth in the coming years. We operate in an extremely volatile market, so our ability to expand our optical business and acceptance of new product offerings is difficult to predict.

Gross loss. Gross loss was $21.1 million and $14.1 million for the nine months ended September 30, 2016 and 2015, respectively, an increase in gross loss of $7.0 million. The increase in gross loss was primarily attributable to charges incurred in connection with our decision to exit the LED market and close our Malaysia facility including an excess raw material inventory write-down of $4.0 million, severance expense of $793,000 and consumable stock write-off expense of $534,000. In addition, we recorded a write-down of $2.3 million of excess two-inch core inventory and severance expense of $180,000 for the reduction in staffing in the U.S.

General and administrative expenses. G&A expenses were $6.2 million and $7.3 million for the nine months ended September 30, 2016 and 2015, respectively, a decrease of $1.1 million. The decrease is attributable to a decrease in bad debt expense of $400,000 on lower revenue and improved collections, a decrease in recruiting costs of $270,000, lower employee compensation costs of $261,000 on lower headcount, and lower investor relations expenditures of $166,000. A decrease in legal costs of $900,000, as costs in 2015 included $900,000 legal settlement expense, was offset by a $900,000 increase due to expenses related to our 2016 proxy solicitation and annual meeting process, which involved a contested director election.

Sales and marketing expenses. Sales and marketing expenses were $1.2 million and $979,000 for the nine months ended September 30, 2016 and 2015, respectively, an increase of $168,000. The increase was primarily due to higher employee compensation costs on increased headcount for optical and industrial sapphire sales.

Research and development expenses. R&D expenses were $2.0 million and $1.6 million for the nine months ended September 30, 2016 and 2015, respectively, an increase of $440,000. The increase was primarily attributable to the recognition of the estimated costs of $217,000 on the government contract in excess of the contract value, an increase in employee compensation costs of $311,000 on higher headcount, and an increase in project costs of $109,000 partially offset by a decrease of $169,000 in depreciation on R&D equipment and a decrease in employee travel of $35,000.

Long-lived asset impairment charges. When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, we perform an analysis to review the recoverability of the asset s carrying value. We make estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. The estimated fair value of assets is determined using appraisal techniques which assume the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. Any impairment losses are recorded as operating expenses, which reduce net income. In response to our current period operating losses combined with our history of continuing operating losses, we evaluate the recoverability of certain property and equipment.

At September 30, 2015, the overall outlook for the sapphire market continued to be volatile as industry analysts reported significant worldwide over-capacity and pricing of sapphire products reached historical lows. Based on our assessment using our most recent projections, impairment to these assets was indicated as of September 30, 2015, as the recoverable amount of undiscounted cash flows did not exceed the carrying amount of these assets. For the nine months ended September 30, 2015, we recorded an asset impairment charge on machinery, equipment and facilities of $39.6 million using a cost and market approach to determine the current fair market value.

With the announcement of the closing of the Malaysia facility, we engaged an independent valuation company to assist in the determination of the fair market value of certain of the assets. We evaluated our Malaysia asset portfolio

(other than the assets covered by the aforementioned purchase agreement) based on assuming an orderly liquidation plan which considers economic obsolescence and sales of comparable equipment rather than a cost and market approach as it is our intention to sell these assets. Based on this review, we recorded for the three months ended September 30, 2016 an asset impairment charge on machinery, equipment and facilities of $10.2 million.

At September 30, 2016, we reviewed the current fair market value of the U.S. assets and based on a cost and market approach concluded that no additional adjustments were needed except for the extra land we own in Batavia, Illinois. We are actively pursuing the sale of this land. The property has a book value of $1.6 million and since the expected sale price is below the book value of the property, for the nine months ended September 30, 2016, an impairment charge of $265,000 was recorded. While we are considering the sale of other certain U.S. based assets, a decision has not yet been made. If those assets are to be sold, they will be re-valued based on liquidation value at that time.

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Other income (expense). Other income was $191,000 for the nine months ended September 30, 2016 and other expense was $2.1 million for the nine months ended September 30, 2015, a decrease in other expense of $2.3 million primarily due to a decrease in realized losses on foreign currency translation.

Income tax benefit. In accordance with ASC740 Accounting for Income Taxes (ASC740), we evaluate our deferred income tax assets quarterly to determine if valuation allowances are required or should be adjusted. ASC740 requires that companies assess whether valuation allowances should be established against their deferred tax assets based on consideration of all available evidence, both positive and negative, using a more likely than not standard. We are in a cumulative loss position for the past three years, which is considered significant negative evidence by the accounting standards that is difficult to overcome on a more likely than not standard through objectively verifiable data. The accounting standards attribute greater weight to objective negative evidence than to subjective positive evidence, such as our projections for future growth. Based on this evaluation, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all the available evidence. At September 30, 2016 we continue to be in a three-year cumulative loss position; therefore, until an appropriate level of profitability is attained, we expect to maintain a valuation allowance on net deferred tax assets related to future U.S. and Malaysia tax benefits and will no longer accrue tax benefits or tax expense on our Consolidated Statement of Operations. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made. The tax provision for the nine months ended September 30, 2016 is based on an estimated combined statutory effective tax rate. For the nine months ended September 30, 2016, the difference between our effective tax rate of 1.3% and the U.S. federal 35% statutory rate and state 6.2% (net of federal benefit) statutory rate was primarily related to U.S. and Malaysia valuation allowances and Malaysia foreign tax rate differential.

LIQUIDITY AND CAPITAL RESOURCES

We have historically funded our operations using a combination of issuances of common stock and cash generated from our operations. Starting in December 2015, and from time to time in the nine months ended September 30, 2016, we borrowed and subsequently repaid $1.5 million from our credit facility. In September 2016 we voluntarily terminated our credit facility.

As of September 30, 2016, we had cash and short term investments totaling $16.4 million, including cash of $5.4 million held in deposits at major banks and $11.0 million invested in money market funds.

We plan to limit our capital expenditures to only those required under existing obligations or as otherwise necessary to realize value from the development, commercialization or sale of products.

Cash flows from operating activities

The following table represents the major components of our cash flows from operating activities for the nine months ended September 30, 2016 and 2015:

	Nine months ended September 30,	
	2016	**2015**
	(in millions)	

Net loss	$ (40.3)	$ (65.1)
Non-cash items:		
Depreciation and amortization	4.9	9.8
Stock based compensation and other, net	1.1	1.0
Long-lived asset impairment charges	10.5	39.6
Deferred taxes	(0.6)	(0.6)
Total non-cash items:	15.9	49.8
Working capital:		
Accounts receivable	(0.2)	5.0
Inventories	5.1	(3.1)
Inventory reserves	6.0	0.9
Prepaid expenses and other assets	2.3	1.5
Accounts payable	(1.0)	(0.9)
Other accruals	0.8	
Total working capital items:	12.9	3.4
Net cash used in operating activities	$ (11.5)	$ (11.9)

Cash used in operating activities was $11.5 million for the nine months ended September 30, 2016. During such period, we generated a net loss of $40.3 million, non-cash expenses of $15.9 million, and an increase in cash from net working capital of $12.9 million. The net working capital cash increase was driven by a decrease in inventory of $11.0 million primarily related to write-downs of excess core and raw materials inventories and complete draw down of consignment inventory by our major customer, and a decrease in other prepaid expenses of $2.3 million primarily related to a decrease in prepaid furnace and machinery components. This increase was partially offset by an increase in accounts receivable of $240,000 on timing of customer payments and a decrease in accounts payable and other accruals of $212,000 on timing of payments.

Cash used in operating activities was $11.9 million for the nine months ended September 30, 2015. During such period, we generated a net loss of $65.1 million, non-cash expenses of $49.8 million, and an increase in cash from net working capital of $3.4 million. The net working capital cash increase was driven by a decrease in accounts receivable of $5.0 million on timing of customer payments and lower sales and a decrease in other prepaid expenses of $1.5 million primarily related to a decrease in prepaid furnace components. This increase was partially offset by an increase in inventory of $2.2 million primarily related to an increase in work-in-process and finished goods partially offset by a decrease in raw materials and a decrease in accounts payable and other accruals of $855,000 due to timing of payments.

Cash flows from investing activities

The following table represents the major components of our cash flows from investing activities for the nine months ended September 30, 2016 and 2015:

	Nine months ended September 30,	
	2016	**2015**
	(in millions)	
Purchases of property and equipment	$ (0.6)	$ (0.8)
Purchases of investments		(3.1)
Proceeds from disposal of assets	0.2	
Proceeds from sale of investments	8.9	11.0
Net cash used in investing activities	$ 8.5	$ 7.1

Net cash provided by investing activities was $8.5 million for the nine months ended September 30, 2016. During the nine months ended September 30, 2016, we used approximately $595,000 on the purchase of equipment for our new coating process and used proceeds from the sale of investments of $8.9 million to fund operations and capital spending.

Net cash provided by investing activities was $7.1 million for the nine months ended September 30, 2015. During the nine months ended September 30, 2015, we used approximately $801,000 on the purchase of equipment primarily for our facility in Penang, Malaysia. We used proceeds from the sale of investments of $11.0 million partially offset by the purchases of investments of $3.1 million to fund operations and capital spending.

Cash flows from financing activities

Net cash used in financing activities was $1.5 million for the nine months ended September 30, 2016, which is primarily due to cash used to pay off borrowings under our credit facility. Net cash provided by financing activities was $12,000 for the nine months ended September 30, 2015, which represented cash used to settle net equity awards of $16,000 and proceeds from the exercise of options of $4,000, partially offset by a change in restricted cash of $8,000.

Future liquidity requirements

We believe that our existing cash, cash equivalents, anticipated cash flows from operating activities and proceeds from sales of fixed assets will be sufficient to meet our anticipated cash needs for at least the next twelve months. However, if we are not able to reduce our use of cash in the next twelve months, we may not have enough funds available to continue operating at our current level in future periods. Our cash needs include cash required to fund our operations, and the capital needed to fund any future expansion in the U.S. and investments in new product development. If the assumptions underlying our business plan regarding future revenues and expenses change, or if unexpected opportunities or needs arise, we may seek to raise additional cash by selling equity or convertible debt securities. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. On April 19, 2016, we received notice from the Listing Qualifications Department of The NASDAQ Stock Market (NASDAQ) stating that we were not in compliance with NASDAQ s minimum bid price requirement of $1.00 per share for continued listing, because the closing bid price for our stock was below $1.00 for 30 consecutive business days. We had an initial grace period of 180 calendar days to regain compliance with the minimum bid price requirement for continued listing. On October 18, 2016, we received approval from NASDAQ to transfer the listing of our common stock to the NASDAQ Capital Market effective on October 20, 2016. As a result of the transfer, we were granted an additional 180 calendar day grace period, or until April 17, 2017 to regain compliance with NASDAQ s minimum bid price requirement. In order to regain compliance and qualify for continued listing on the Nasdaq Capital Market, the closing bid price of our common stock must be at least $1.00 per share for a minimum of ten consecutive business days. In the event we do not regain compliance by April 17, 2017, our common stock will be subject to delisting by NASDAQ. If our common stock was delisted, it would significantly impact our ability to raise funds through the issuance of equity. If we obtain debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, and the terms of the debt securities issued could impose significant restrictions on our operations. If we are unable to obtain financing, we may be unable to continue operations or successfully execute our business plan.

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CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We consider to be critical those accounting policies that require our most subjective or complex judgments, which often result from a need to make estimates about the effect of matters that are inherently uncertain, and that are among the most important of our accounting policies in the portrayal of our financial condition and results of operations. We believe the following to be our critical accounting policies, including the more significant estimates and assumptions used in preparation of our financial statements.

Foreign currency translation and transaction

Rubicon Worldwide LLC, Rubicon Technology Hong Kong Limited and Rubicon Technology Korea Yuhan Hosea s assets and liabilities are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates and capital accounts at historical exchange rates. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. Translation adjustments resulting from fluctuations in exchange rates for Rubicon Worldwide LLC, Rubicon Technology Hong Kong Limited and Rubicon Technology Korea Yuhan Hosea are recorded as a separate component of accumulated other comprehensive income (loss) within stockholders equity.

We have determined that the functional currency of Rubicon Sapphire Technology (Malaysia) SDN BHD is the U.S. dollar. Rubicon Sapphire Technology (Malaysia) SDN BHD s assets and liabilities are translated into U.S. dollars using the remeasurement method. Non-monetary assets are translated at historical exchange rates and monetary assets are translated at exchange rates existing at the respective balance sheet dates. Translation adjustments for Rubicon Sapphire Technology (Malaysia) SDN BHD are included in determining net income (loss) for the period. The results of operations are translated into U.S. dollars at the average exchange rates during the respective period. We record these gains and losses in other income (expense).

Foreign currency transaction gains and losses are generated from the effects of exchange rate changes on transactions denominated in a currency other than our functional currency, which is the U.S. dollar. Gains and losses on foreign currency transactions are generally required to be recognized in the determination of net income (loss) for the period. We record these gains and losses in other income (expense).

Revenue recognition

We recognize revenue from sales of products and billings for costs and fees from government contracts when earned.

Product Sales

Revenue is recognized when, and if, evidence of an arrangement is obtained and the other criteria to support revenue recognition are met, including:

Persuasive evidence of an arrangement exists. We require evidence of a purchase order with the customer specifying the terms and specifications of the product to be delivered, typically in the form of a signed quotation or purchase order from the customer.

Title has passed and the product has been delivered. Title passage and product delivery generally occurs when the product is delivered to a common carrier.

The price is fixed or determinable. All terms are fixed in the signed quotation or purchase order received from the customer. The purchase orders do not contain rights of cancellation, return, exchanges or refunds.

Collection of the resulting receivable is reasonably assured. Our standard arrangement with customers includes payment terms. Customers are subject to a credit review process that evaluates each customer s financial position and its ability to pay. We determine collectability by considering the length of time the customer has been in business and our history of collections with that customer. If we determine that collection is not probable, no product is shipped and no revenue is recognized unless cash is received in advance.

In July 2012, we signed a contract with the Air Force Research Laboratory to produce large-area sapphire windows on a cost plus fixed fee basis. We recognize revenue from this contract in the period during which the related costs are incurred over the contractually defined period. We expect to complete our contract in 2017.

We do not provide maintenance or other services and the Company does not have sales that involve multiple elements or deliverables.

Inventory valuation

We value our inventory at the lower of cost or market. Market is determined based on net realizable value. Raw materials cost is determined using the first-in, first-out method, and work-in-process and finished goods costs are determined on a weighted-average cost basis which includes materials, labor and overhead. We establish inventory reserves when conditions exist that suggest inventory may be in excess of anticipated demand or is obsolete based on customer required specifications. We evaluate the ability to realize the value of our inventory based on a combination of factors, including forecasted sales, estimated current and future market value and changes in customers product specifications. For the nine months ended September 30, 2016, we accepted sales orders for core and wafer products at prices lower than our cost. Based on these sales prices, we recorded for the nine months ended September 30, 2016 an adjustment which increased costs of goods sold and reduced inventory by $1.1 million. Our method of estimating excess and obsolete inventory has remained consistent for all periods presented. For the three and nine months ended September 30, 2016, we determined we had excess two-inch core inventory and recorded a write-down of $2.3 million. In connection with the closing of our Malaysia facility and ceasing LED production, we also recorded for the three and nine months ended September 30, 2016, write-downs for excess raw material inventory of $4.0 million, and consumable stock write-off expense of $534,000. If our recognition of excess or obsolete inventory is, or if our estimates of our inventory s potential utility become, less favorable than currently expected, additional inventory reserves may be required. We determine our normal operating capacity and record as an expense costs attributable to lower utilization of equipment and staff. For the three and nine months ended September 30, 2016, we determined that we were not operating at capacity and recorded costs associated with lower utilization of equipment and staff of $1.9 million and $6.5 million, respectively. For the remainder of 2016, it is likely that we will incur additional costs due to lower utilization of equipment and staff.

Investments

We invest available cash primarily in investment grade commercial paper, FDIC guaranteed certificates of deposit, corporate notes and government securities. Investments classified as available-for-sale securities are carried at fair market value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in trading securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense) in the Consolidated Statement of Operations. Investments in which we have the ability and intent, if necessary, to liquidate in order to support our current operations are classified as short-term.

We review our available-for-sale securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. We consider various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When we conclude that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the Consolidated Statement of Operations. As of September 30, 2016, no impairment was recorded.

Allowance for doubtful accounts

We estimate the allowance for doubtful accounts based on an assessment of the collectability of specific customer accounts. The determination of risk for collection is assessed on a customer-by-customer basis considering our historical experience and expected future orders with the customer, changes in payment patterns, and recent information we have about the current status of our accounts receivable balances. If we determine that a specific customer is a risk for collection, we provide a specific allowance for credit losses to reduce the net recognized

receivable to the amount we reasonably believe will be collected. We believe that, based on the customers to whom we sell and the nature of our agreements with them, our estimates are reasonable. Our method of estimating collectability has remained consistent for all periods presented and with past collections experience.

Long-lived assets

We review property and equipment for impairment whenever events or circumstances indicate that carrying amounts may not be recoverable. If such events or changes in circumstances occur, we will recognize an impairment loss if the undiscounted future cash flows expected to be generated by the assets are less than the carrying value of the related asset. The impairment loss would adjust the asset to its fair value.

In evaluating the recoverability of long-lived assets, we must make assumptions regarding estimated future cash flows and other factors to determine the fair value of such assets. If our fair value estimates or related assumptions change in the future, we may be required to record impairment charges related to property and equipment. Asset recoverability is first measured by comparing the assets carrying amount to their expected future undiscounted net cash flows to determine if the assets are impaired. If such assets are considered to be impaired, the impairment recognized is measured based on the amount by which the carrying amount of the assets exceeds the fair value. The estimated fair value of assets is determined using appraisal techniques which assume the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. If our assumptions for usage of the assets change, we revise the appraisal techniques used to determine fair value to reflect that usage. We engage an independent valuation company to assist with determining fair market value.

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In response to our current period operating losses combined with our history of continuing operating losses, we evaluated the recoverability of certain property and equipment. In the third quarter of 2015, the overall outlook for the sapphire market continued to be volatile as industry analysts reported significant worldwide over-capacity and pricing of sapphire products reached historical lows. Based on our quarterly assessment using the most recent projections, impairment to these assets was indicated as of September 30, 2015, as the recoverable amount of undiscounted cash flows did not exceed the carrying amount of these assets and we recorded an asset impairment charge on machinery, equipment and facilities using a cost and market approach to determine the current fair market value.

At September 30, 2016, we reviewed the current fair market value. With the announcement of the closing of the Malaysia facility and our intention to sell those assets, our asset usage assumption for those assets has changed. Therefore, we evaluated our Malaysia asset portfolio (other than the assets covered by the aforementioned purchase agreement) based on assuming an orderly liquidation plan which considers economic obsolescence and sales of comparable equipment rather than a cost and market approach as it is our intention to sell these assets. We engaged an independent valuation company to assist in the determination of the fair market value of certain of the assets. Based on this review, we recorded for the three and nine months ended September 30, 2016 an asset impairment charge on machinery, equipment and facilities of $10.2 million.

At September 30, 2016, we reviewed the current fair market value of our U.S. assets and concluded that no additional adjustments were needed except for the extra land we own in Batavia, Illinois. We are actively pursuing the sale of extra land we own in Batavia, Illinois. The property has a book value of $1.6 million, and it is our intention to complete a sale within the next twelve-month period. Therefore, this property was reclassified as a current asset held for sale in the second quarter 2016. Since the expected sale price is below the book value of the property, for the nine months ended September 30, 2016, an impairment charge of $265,000 was recorded.

We will continue to assess our long-lived assets to ensure the carrying amount of these assets is still appropriate given any changes in asset usage, the marketplace and other factors used in determining the current fair market value.

Stock-based compensation

We expense stock options based upon the fair market value on the date of grant. We use the Black-Scholes option pricing model to determine the fair value of stock options. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by assumptions regarding a number of complex and subjective variables. These variables include our expected stock volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rates, forfeitures and expected dividends.

The expected term represents the weighted-average period that our stock options are expected to be outstanding and is based upon five years of historical data. We estimate the volatility of our common stock based on a five year historical stock price. We base the risk-free interest rate that we use in the option pricing model on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options. We do not anticipate paying any cash dividends in the foreseeable future and, therefore, use an expected dividend yield of zero in the option pricing model. We are required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. The current forfeiture rate of 23.1% was based on our past history of forfeitures.

We allocate stock based compensation costs using a straight-line method which amortizes the fair value of each option on a straight-line basis over the service period. Based on the variables affecting the valuation of our common stock and the method used for allocating compensation costs, we recognized $147,000 and $460,000 in stock compensation expense during the three and nine months ended September 30, 2016, respectively.

All option grants made during the three and nine months ended September 30, 2016 and 2015 were granted at an exercise price per share equal to the closing market price of our common stock on the last market trading day prior to the date of grant. Therefore, there is no intrinsic value because the exercise price per share of each option was equal to the fair value of the common stock on the date of grant.

Based on the fair market value of the common stock at September 30, 2016, there is no aggregate intrinsic value of all stock options outstanding and exercisable.

Income tax valuation allowance

Evaluating the need for and amount of a valuation allowance for deferred tax assets often requires significant judgment and extensive analysis of all the positive and negative evidence available to determine whether all or some portion of the deferred tax assets will not be realized. A valuation allowance must be established for deferred tax assets when it is more likely than not (a probability level of more than 50%) that they will not be realized. In general, realization refers to the incremental benefit achieved through the reduction in future taxes payable or an increase in future taxes refundable from the deferred tax assets, assuming that the underlying deductible differences and carryforwards are the last items to enter into the determination of future taxable income. In determining our valuation allowance, we consider the source of taxable income including taxable income in prior carryback years, future reversals of existing temporary differences, the required use of tax planning strategies, and future taxable income exclusive of reversing temporary differences and carryforwards. We are in a cumulative loss position for the past three years, which is considered significant negative evidence by the accounting standards that is difficult to overcome on a more likely than not standard through objectively verifiable data. Under the accounting standards, objective verifiable evidence is given greater weight than subjective evidence, such as our projections for future growth. Based on an evaluation in accordance with the accounting standards, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all the available evidence. At September 30, 2016, we continue to be in a three-year cumulative loss position; therefore until an appropriate level of profitability is attained, we expect to maintain a full valuation allowance on our U.S. and Malaysia net deferred tax assets.

Recent accounting pronouncements

In August 2014, the FASB issued ASU No. 2014-15 (ASU 2014-15), *Presentation of Financial Statements Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity s Ability to Continue as a Going Concern*. The standard requires management to evaluate whether there is substantial doubt about an entity s ability to continue as a going concern and to provide related footnote disclosures. Management must evaluate whether it is probable that known conditions or events, considered in the aggregate, would raise substantial doubt about the entity s ability to continue as a going concern within one year after the date that the financial statements are issued. If such conditions or events are identified, the standard requires management s mitigation plans to alleviate the doubt or a statement of the substantial doubt about the entity s ability to continue as a going concern to be disclosed in the financial statements. The standard is effective for fiscal years and interim periods beginning after December 15, 2016, with early adoption permitted. We are evaluating the impact, if any, of adopting ASU 2014-15 on our financial statements.

In July 2015, the FASB issued ASU No. 2015-11 (ASU 2015-11), *Inventory (Topic 330): Simplifying the Measurement of Inventory.* The amendments in this ASU require an entity to measure in-scope inventory at the lower of cost and net realizable value, further clarifying consideration for net realizable value as estimated selling prices in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. This ASU more closely aligns the measurement of inventory in GAAP with the measurement of inventory in International Financial Reporting Standards (IFRS). For public business entities, ASU 2015-11 is effective for annual periods and interim periods beginning after December 15, 2016. The amendments in this ASU are prospectively applied with earlier adoption permitted. We are evaluating this guidance and do not believe the adoption will significantly impact the presentation of our financial condition, results of operations and disclosures.

In January 2016, the FASB issued ASU No. 2016-01 (ASU 2016-01), *Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities.* The standard requires equity investments (except those accounted for under the equity method of accounting, or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income, requires public business

entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes, requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset, and eliminates the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost. These changes become effective for fiscal years beginning after December 15, 2017. We are evaluating the impact, if any, of adopting ASU 2016-01 on our financial statements.

In February 2016, the FASB issued ASU No. 2016-02 (ASU 2016-02), *Leases (Topic 842)* which modifies the lease recognition requirements and requires entities to recognize the assets and liabilities arising from leases on the balance sheet. ASU 2016-02 requires entities to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018. Early adoption is permitted. We are evaluating the impact, if any, of adopting ASU 2016-02 on our financial statements.

In March 2016, the FASB issued ASU No. 2016-09 (ASU 2016-09), *Compensation Stock Compensation* (*Topic 718): Improvements to Employee Share-Based Payment Accounting* which modifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. ASU 2016-09 is effective for annual reporting periods beginning after December 15, 2016 with early adoption permitted. We are evaluating the impact, if any, of adopting ASU 2016-09 on our financial statements.

In April 2016, the FASB issued ASU No. 2016-10 (ASU 2016-10), *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing.* This update clarifies how an entity identifies performance obligations related to customer contracts as well as helps to improve the operability and understanding of the licensing implementation guidance. The amendments in this update affect the guidance in ASU No. 2014-09, (ASU 2014-09), *Revenue from Contracts with Customers (Topic 606),* which supersedes most of the current revenue recognition requirements. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The guidance provides a five-step analysis of transactions to determine when and how revenue is recognized. Other major provisions include capitalization of certain contract costs, consideration of time value of money in the transaction price, and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. The guidance also requires enhanced disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity s contracts with customers. The guidance is effective for the interim and annual periods beginning on or after December 15, 2017 (early adoption is not permitted). The guidance permits the use of either a retrospective or cumulative effect transition method. In May 2016, the FASB issued ASU No. 2016-12, (ASU 2016-12), *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients.* This update clarifies the objectives of collectability, sales and other taxes, noncash consideration, contract modifications at transition, completed contracts at transition and technical correction. The amendments in this update affect the guidance in ASU 2014-09. We are evaluating the impact, if any, of adopting ASU 2014-09 and its updates, ASU 2016-10 and ASU 2016-12, on our consolidated financial statements.

OFF-BALANCE SHEET ARRANGEMENTS

We do not have any off-balance sheet arrangements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

As of September 30, 2016, there were no material changes in the information regarding market risk contained in our Annual Report on Form 10-K, as amended, for the fiscal year ended December 31, 2015.

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ITEM 4. CONTROLS AND PROCEDURES

Management s evaluation of disclosure controls and procedures

Based on evaluations at September 30, 2016, our chief executive officer and chief financial officer (together, our certifying officers), with the participation of the management team, have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that material information relating to the Company is accumulated and communicated to management, including our certifying officers, as appropriate to allow timely decisions regarding required disclosures.

Changes in internal control over financial reporting

Our certifying officers have concluded that there were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the quarter ended September 30, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II

ITEM 1. LEGAL PROCEEDINGS

On November 19, 2015, the Carolyn Piper Smithhisler Living Trust, derivatively on behalf of Rubicon Technology Inc., filed a complaint in the Eighteenth Judicial Circuit of Illinois against the Company s Board of Directors and certain senior officers seeking to remedy alleged breaches of fiduciary duties and other violations of the law, failure to implement an effective system of internal controls, and failure to oversee the public statements made by the Company and certain individual defendants. The complaint sought as a remedy to recover damages against the individual defendants for the benefit of the Company and to require the Company to reform and improve its corporate governance and internal procedures plus attorneys fees. After extensive discussions, the parties informed the court on May 2, 2016 that they had reached a settlement agreement in principle. The proposed settlement provides for the Company to adopt certain governance changes and to pay certain amounts. On May 23, 2016, the court issued an order granting preliminary approval of the proposed settlement. On July 11, 2016, plaintiff s unopposed motion for final approval of stockholder derivative settlement fee and expense amount and service award was filed. On August 1, 2016, the court issued a final judgment approving the settlement and an order of dismissal was granted. The Company s insurance carriers are expected to cover substantially all of the settlement payments and related expenses, including legal fees.

ITEM 1A. RISK FACTORS

Our business is influenced by many factors that are difficult to predict, involve uncertainties that may materially affect actual results and are often beyond our control. In addition to the factors discussed separately in this report, we have identified a number of these risk factors in our Annual Report on Form 10-K, as amended, for the year ended December 31, 2015 and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016, which factors should be taken into consideration when reviewing the information contained in this report. The following risk factors reflect certain modifications of, or additions to, the risk factors set forth in our Annual Report on Form 10-K, as amended, for the year ended December 31, 2015 and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016. In addition, all of our risk factors should be considered in light of

our decision to limit our focus to the optical and industrial sapphire markets and to exit the LED and mobile device markets.

The outcome of our recent shift to limit our business focus to the optical and industrial sapphire markets is subject to many factors and may not result in improved profitability or operating results.

In connection with the Board of Directors continuing review of alternatives with a goal of providing greater value to our stockholders, on September 12, 2016, we announced the Board s decision to limit our business focus to the optical and industrial sapphire markets and to exit the LED and mobile device markets. The optical and industrial sapphire markets are smaller markets than our historical undertakings and there is no assurance that we will be able to successfully expand our optical and industrial sapphire business, or that such shift in focus will ultimately improve our profitability or operating results. Our annual revenue from optical and industrial products over the past three years has been between $4.5 million and $7.1 million, representing 11% to 21% of our total revenue in those years. In addition, our revenue from the optical and industrial markets also tends to be concentrated, with four customers accounting for approximately 20%, 14%, 10% and 10% of the optical revenue for the year ended December 31, 2015 and two customers accounting for approximately 16% and 14% of the optical revenue for the year ended December 31, 2014. We expect our revenue to continue to be concentrated among a small number of customers, although our significant customers may change from period to period.

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Our operating results have historically fluctuated and are dependent upon a number of factors, many of which are beyond our control. Some of the factors that will affect operating results from our shift to limit our business focus to the optical and industrial sapphire markets include, among others:

- The amount and timing of costs relating to the expansion of our operations in the optical and industrial markets;
- Our ability to attract new customers;
- Gain or loss of significant customers;
- Timing and size of orders from and shipments to customers;
- Volatility of sapphire product prices;
- Our ability to develop, introduce and market new products and technologies on a timely basis;
- Our ability to meet customer specifications for products;
- Market acceptance of our optical and industrial sapphire products;
- Our ability to retain key relationships with suppliers and contractor third parties, including for the slicing and polishing functions for our sapphire crystal;
- Performance of suppliers, contractors and other third parties on whom we depend;
- Fluctuations in gross margins as a result of changes in capacity utilization, product mix or other factors;
- Our ability to reduce costs commensurate to our scaled down operations;
- Competitive market conditions, including pricing actions by our competitors and our customers competitors;

- Announcements of technological innovations, new products or upgrades to existing products by us or our competitors;

- Additions or departures of key personnel, which could be affected by our recent announcements to shift our business focus and consolidate our operations; and

- General economic conditions in the optical and industrial sapphire markets.

These, as well as other factors, could materially adversely affect our quarterly or annual operating results. Our revenues are difficult to predict and we may be unable to adjust spending in a timely manner to compensate for any revenue shortfall. If revenue levels are below expectations for any reason, our business, financial condition and results of operations could be materially and adversely impacted.

We expect to rely on third parties for certain finishing steps for our products, including the slicing and polishing of our sapphire crystal.

In order to reduce product costs and improve cash flow, we plan to use third parties for certain finishing functions for our products, including the slicing and polishing of our sapphire crystal inventory. These types of services are only available from a limited number of third parties. Successful implementation of our plan to outsource these finishing functions will substantially depend on our ability to develop, maintain and expand our strategic relationship with these third parties. Any impairment in our relationships with the third parties performing these functions, in the absence of a timely and satisfactory alternative arrangement, could have a material adverse effect on our business, results of operations, cash flow and financial condition. In addition, we do not control any of these third parties or the operation of their facilities, and we may not be able to adequately manage and oversee the third parties performing our finishing functions. Accordingly, any difficulties encountered by these third parties that result in product defects, delays or defaults on their contractual commitments to us could adversely affect our business, financial condition and results of operations. In addition, their facilities may be vulnerable to damage or interruption from natural disasters, inclement weather conditions, power loss, acts of terrorism and similar events. A decision to close a facility without adequate notice as a result of these or other unanticipated problems at the facility could result in lengthy interruptions in their services to us; and any loss or interruption of these services could significantly increase our expenses, cause us to default on our obligations to our customers and/or otherwise adversely affect our business. Furthermore, the outsourcing of our finishing steps, such as slicing and polishing the wafers, may not continue to be available at reasonable prices or on commercially reasonable terms, or at all.

We are exploring, evaluating and have begun implementing alternatives with a goal of providing greater value to our stockholders. There can be no assurance that we will be successful in identifying additional alternatives or implementing any alternative, or that any alternative will yield additional value for stockholders.

Our management and Board of Directors are continuing to review alternatives with a goal of providing greater value to our stockholders. These alternatives could result in, among other things, modifying or eliminating certain of our operations, selling material assets or business segments, seeking additional financing, a sale of the business, a merger, consolidation or other business combination, partnering or other collaboration agreements, or potential acquisitions or recapitalizations, in one or more transactions. In connection with the Board s continuing review of alternatives, on September 12, 2016, the Board determined to shut down production activities and close our facility in Penang, Malaysia, and to sell our assets relating to the Malaysian operations. Production activities at the Penang facility are expected to cease by November 30, 2016, with the shutdown of the facility to be completed by December 31, 2016. There is no assurance that we will be able to sell our assets in Malaysia at prices favorable to us, or at all. Also on September 12, 2016, we announced the Board s decision to limit our focus on the optical and industrial sapphire markets and to exit the LED and mobile device markets. There is no assurance that we will be able to successfully expand our optical and industrial sapphire business or that we will obtain market acceptance for any new product offerings in these markets. Additionally, there can be no assurance that our continued exploration of alternatives will result in the identification of additional alternatives or that any transaction will be consummated. The process of exploring alternatives may be costly and may be time consuming, distracting to management and disruptive to our business operations. If we are unable to effectively manage the process, our business, financial condition and results of operations could be adversely affected. We also cannot provide assurance that any potential transaction or other alternative identified, evaluated and consummated, will provide greater value to our stockholders than that reflected in the current stock price. Any potential transaction would be dependent upon a number of factors that may be beyond our control, including, among other factors, market conditions, industry trends, the interest of third parties in our business and the availability of financing to potential buyers on reasonable terms.

Our common stock could be delisted from NASDAQ if the closing bid price remains below $1.00 per share.

On April 19, 2016, when our common stock was listed on the NASDAQ Global Market, we received notice from the Listing Qualifications Department of The NASDAQ Stock Market LLC (NASDAQ) indicating that we no longer comply with the minimum bid price requirement because the closing bid price for our stock was below $1.00 for 30 consecutive business days. In accordance with the NASDAQ listing rules, we had an initial grace period of 180 calendar days to regain compliance with the minimum bid price requirement. On October 18, 2016, we received approval from NASDAQ to transfer the listing of our common stock from the NASDAQ Global Market to the NASDAQ Capital Market. This transfer was effective at the opening of business on October 20, 2016. As a result of this transfer, we were granted an additional 180-day grace period to regain compliance with NASDAQ s minimum bid price requirement. To regain compliance and qualify for continued listing on the NASDAQ Capital Market, the bid price per share of our common stock must be at least $1.00 for at least ten consecutive business days during the additional 180-day grace period, which will end on April 17, 2017. NASDAQ may, in its discretion, require our common stock to maintain a bid price per share of at least $1.00 for a period in excess of ten consecutive business days, but generally no more than 20 consecutive business days, before determining that we have demonstrated an ability to maintain long-term compliance. If we fail to regain compliance by April 17, 2017, our common stock will be subject to delisting by NASDAQ. There is no assurance that our common stock will not be delisted. If our common stock is delisted, additional sales practice requirements would be imposed on broker-dealers who sell our securities. The additional burdens imposed upon broker-dealers by these requirements could discourage broker-dealers from effecting transactions in our common stock. This would significantly affect the ability of investors to trade our securities and would significantly negatively affect the value and liquidity of our common stock. These factors could contribute to lower prices and larger spreads in the bid and ask prices for our common stock. In addition, if our

common stock is delisted, it could make it significantly more difficult for us to raise capital and adversely affect the market liquidity for the offered securities. In connection with the transfer of our common stock to the NASDAQ Capital Market, we provided written notice to NASDAQ of our intention to cure the minimum bid price deficiency during the additional grace period, including by carrying out a reverse stock split, if necessary. If we seek to implement a reverse stock split in order to remain listed on NASDAQ, the announcement and/or implementation of a reverse stock split could significantly negatively affect the price of our common stock.

ITEM 6. EXHIBITS

The exhibits filed or incorporated by reference as a part of this report are listed in the Index to Exhibits which appears following the signature page to this Quarterly Report on Form 10-Q and is incorporated by reference.

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SIGNATURES

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

	Rubicon Technology, Inc.
Date: November 9, 2016	By: /s/ William F. Weissman William F. Weissman President and Chief Executive Officer
Date: November 9, 2016	By: /s/ Mardel A. Graffy Mardel A. Graffy Chief Financial Officer

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EXHIBIT INDEX

The Exhibits listed below are filed or incorporated by reference as part of this Quarterly Report on Form 10-Q.

Exhibit No.	Description	Incorporation by Reference
3.1	Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Exhibit 3.1 to the registrant s Registration Statement on Form S-1/A, filed on November 1, 2007 (File No. 333-145880)
3.2	Amendment No. 1 to Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Appendix A to the registrant s Definitive Proxy Statement on Schedule 14A, filed on April 29, 2011 (File No. 1-33834)
3.3	Second Amended and Restated Bylaws of Rubicon Technology, Inc.	Filed as Exhibit 3.3 to the registrant s Quarterly Report on Form 10-Q, filed on May 10, 2016 (File No. 1-33834)
10.1	Pay-Off Letter effective as of September 9, 2016	Filed as Exhibit 10.1 to the registrant s Current Report on Form 8-K, filed on September 15, 2016 (File No. 1-33834)
31.1	Certification of Chief 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	
31.2	Certification of Chief Financial 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	
32.1	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	
101.INS**	XBRL Instance Document	
101.SCH**	XBRL Taxonomy Extension Schema Document	
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document	
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document	
101.PRE**	XBRL Taxonomy Extension Presentation Document	
101.DEF**		

XBRL Taxonomy Extension Definition Linkbase Document

** Filed electronically with this Quarterly Report on Form 10-Q

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