ECHELON CORP
Form 10-Q
May 11, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)
[x] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2017
or
[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ___________ to ___________
Commission file number 001-37755
ECHELON CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Delaware	77-0203595
State or Other Jurisdiction of Incorporation or Organization	I.R.S. Employer Identification No.
2901 Patrick Henry Drive Santa Clara, CA	95054
Address of Principal Executive Offices	Zip Code

(408) 938-5200
Registrant’s Telephone Number, Including Area Code

Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report

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 x No o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PRECEDING FIVE YEARS:

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes o No o

APPLICABLE ONLY TO CORPORATE ISSUERS

As of April 30, 2017, 4,441,992 shares of the registrant’s common stock were outstanding.

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FORM 10 Q
FOR THE QUARTER ENDED MARCH 31, 2017
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FORWARD-LOOKING INFORMATION

This report contains forward-looking statements within the meaning of the U.S. federal securities laws that involve risks and uncertainties. Certain statements contained in this report are not purely historical including, without limitation, statements regarding our expectations, beliefs, intentions, anticipations, commitments or strategies regarding the future that are forward-looking. These statements include those discussed in Item 2, Management's Discussion and Analysis of Financial Condition and Results of Operations, including "Critical Accounting Estimates," "Results of Operations," "Off-Balance-Sheet Arrangements and Other Critical Contractual Obligations," "Liquidity and Capital Resources," and "Recently Issued Accounting Standards," and elsewhere in this report.

In this report, the words "may," "could," "would," "might," "will," "should," "plan," " forecast," "anticipate," "believe," "expe "estimate," "predict," "potential," "continue," "future," "moving toward" or the negative of these terms or other similar express also identify forward-looking statements. Our actual results could differ materially from those forward-looking statements contained in this report as a result of a number of risk factors including, but not limited to, those set forth in the section entitled "Factors That May Affect Future Results of Operations" and elsewhere in this report. You should carefully consider these risks, in addition to the other information in this report and in our other filings with the SEC. All forward-looking statements and reasons why results may differ included in this report are made as of the date of this report, and we assume no obligation to update any such forward-looking statement or reason why such results might differ, except as required by law.

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PART I. FINANCIAL INFORMATION
ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
ECHELON CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	March 31, 2017	December 31, 2016
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 8,325	$ 9,803
Restricted investments	1,250	1,250
Short-term investments	11,977	11,983
Accounts receivable, net	3,035	3,015
Inventories	2,516	2,570
Deferred cost of revenues	1,235	1,104
Other current assets	1,025	900
Total current assets	29,363	30,625
Property and equipment, net	395	445
Intangible assets, net	897	953
Other long term assets	875	885
Total assets	$ 31,530	$ 32,908
LIABILITIES AND STOCKHOLDERS’ EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,728	$ 1,697
Accrued liabilities	1,550	2,174
Deferred revenues	3,558	3,671
Total current liabilities	6,836	7,542
LONG-TERM LIABILITIES:		
Other long-term liabilities	684	688
Total long-term liabilities	684	688
STOCKHOLDERS’ EQUITY:		
Common stock	48	48
Additional paid-in capital	358,572	358,123
Treasury stock	(28,130)	(28,130)
Accumulated other comprehensive loss	(2,355)	(2,437)
Accumulated deficit	(304,379)	(303,180)
Total Echelon Corporation stockholders’ equity	23,756	24,424
Noncontrolling interest in subsidiary	254	254
Total stockholders’ equity	24,010	24,678
Total liabilities and stockholders’ equity	$ 31,530	$ 32,908

See accompanying notes to condensed consolidated financial statements.

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ECHELON CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2017	2016
Revenues [2]	$7,799	$8,647
Cost of revenues [1]	3,326	3,805
Gross profit	4,473	4,842
Operating expenses:		
Product development [1]	2,227	2,193
Sales and marketing [1]	1,462	1,302
General and administrative [1]	1,924	2,011
Total operating expenses	5,613	5,506
Loss from operations	(1,140)	(664)
Interest and other income (expense), net	(65)	(205)
Loss before provision for income taxes	(1,205)	(869)
Income tax expense (benefit)	(6)	6
Net loss	$(1,199)	$(875)
Basic and diluted net loss per share	$(0.27)	$(0.20)
Shares used in computing net loss per share:		
Basic	4,434	4,417
Diluted	4,434	4,417

(1) See Note 4 for summary of amounts included representing stock-based compensation expense.
(2) Includes related party amounts of $0 and $1,312 for the three months ended March 31, 2017 and 2016, respectively. See Note 5 and Note 12 for additional information on related party transactions.

See accompanying notes to condensed consolidated financial statements.

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ECHELON CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2017	2016
Net loss	$(1,199)	$(875)
Other comprehensive income (loss), net of tax:		
Foreign currency translation adjustment	83	184
Unrealized holding gain (loss) on available-for-sale securities	(1)	12
Total other comprehensive income (loss)	82	196
Comprehensive loss	$(1,117)	$(679)

See accompanying notes to condensed consolidated financial statements.

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ECHELON CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2017	2016
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES:		
Net loss	$(1,199)	$(875)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	110	144
Reduction in allowance for doubtful accounts	(7)	—
Increase in accrued investment income	(16)	(11)
Stock-based compensation	467	(1)
Adjustment to contingent consideration	—	(318)
Change in operating assets and liabilities:		
Accounts receivable	(96)	(189)
Inventories	54	(433)
Deferred cost of revenues	(125)	40
Other current assets	(124)	41
Accounts payable	42	113
Accrued liabilities	(545)	(904)
Deferred revenues	(39)	(131)
Deferred rent	(18)	109
Net cash used in operating activities	(1,496)	(2,415)
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES:		
Purchases of available for sale short term investments	(5,979)	(3,992)
Proceeds from maturities and sales of available for sale short term investments	6,000	4,000
Change in other long term assets	11	—
Capital expenditures	(16)	(5)
Net cash provided by investing activities	16	3
CASH FLOWS PROVIDED BY (USED IN) FINANCING ACTIVITIES:		
Repurchase of common stock from employees for payment of taxes on vesting of restricted stock units and upon exercise of stock options	(17)	(1)
Net cash used in financing activities	(17)	(1)
EFFECT OF EXCHANGE RATE CHANGES ON CASH	19	10
NET CHANGE IN CASH AND CASH EQUIVALENTS	(1,478)	(2,403)
CASH AND CASH EQUIVALENTS:		
Beginning of period	9,803	7,691
End of period	$8,325	$5,288
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid for income taxes	$37	$53

See accompanying notes to condensed consolidated financial statements.

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ECHELON CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Summary of Significant Accounting Policies

Basis of Presentation

The condensed consolidated financial statements include the accounts of Echelon Corporation, a Delaware corporation, its wholly-owned subsidiaries, and a subsidiary in which it has a controlling interest (collectively referred to as the “Company”). The Company reports non-controlling interests in consolidated entities as a component of equity separate from the Company’s equity. All material inter-company transactions between and among the Company and its consolidated subsidiaries and other consolidated entities have been eliminated in consolidation.

While the financial information furnished is unaudited, the condensed consolidated financial statements included in this report reflect all adjustments (consisting only of normal recurring adjustments) which the Company considers necessary for the fair presentation of the results of operations for the interim periods covered, and of the financial condition of the Company at the date of the interim balance sheet. The results for interim periods are not necessarily indicative of the results for the entire year. The condensed consolidated financial statements should be read in conjunction with the Company’s consolidated financial statements for the year ended December 31, 2016 included in its Annual Report on Form 10-K.

There have been no material changes to the Company’s significant accounting policies as compared to the significant accounting policies described in its Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

Risks and Uncertainties

The Company’s operations and performance depend significantly on worldwide economic conditions and their impact on purchases of the Company’s products, as well as the ability of suppliers to provide the Company with products and services in a timely manner. The impact of any of the matters described below could have an adverse effect on the Company’s business, results of operations and financial condition.

- The Company’s sales are currently concentrated, as approximately 29.6% of revenues for the three months ended March 31, 2017, were derived from one customer, Avnet Europe Comm VA ("Avnet"), the Company's primary distributor of its IIoT products in Europe and Japan. Customers in any of the Company’s target market sectors may experience unexpected reductions in demand for their products and consequently reduce their purchases from the Company, resulting in either the loss of a significant customer or a notable decrease in the level of sales to a significant customer. In addition, if any of these customers are unable to obtain the necessary capital to operate their business, they may be unable to satisfy their payment obligations to the Company.
- The Company utilizes third-party contract electronic manufacturers to manufacture, assemble, and test its products. If any of these third-parties were unable to obtain the necessary capital to operate their business, they may be unable to provide the Company with timely services or to make timely deliveries of products.
- From time to time, the Company has experienced shortages or interruptions in supply for certain products or components used in the manufacture of the Company’s products that have been or will be discontinued. In order to ensure an adequate supply of these items, the Company has occasionally purchased quantities of these items that are in excess of the Company’s then current estimate of short-term requirements. If the long-term requirements do not materialize as originally expected, or if the Company develops alternative solutions that no longer employ these items and the Company is not able to dispose of these excess products or components, the Company could be subject to increased levels of excess and obsolete inventories.
- In an effort to manage costs and inventory risks, the Company has decreased the inventory levels of certain products. If there is an unexpected increase in demand for these items, the Company might not be able to supply its customers with products in a timely manner.

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Use of Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions, and estimates that affect amounts reported in the Condensed Consolidated Financial Statements and accompanying notes. Significant estimates and judgments are used for revenue recognition, performance-based equity compensation, inventory valuation, intangible asset valuation, contingent consideration valuation, allowance for warranty costs, and other loss contingencies. In order to determine the carrying values of assets and liabilities that are not readily apparent from other sources, the Company bases its estimates and assumptions on current facts, historical experience, and various other factors that it believes to be reasonable under the circumstances. Actual results experienced by the Company may differ materially from management’s estimates.

Recently Issued Accounting Standards

(i) New Accounting Standards Recently Adopted

In July 2015, the FASB issued an update to ASC 330, Inventory: Simplifying the Measurement of Inventory. Under this update, subsequent measurement of inventory is based on the lower of cost or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and disposal. This update does not apply to inventory that is measured using last-in, first-out or the retail inventory method. This update was adopted by the Company in the first quarter of fiscal year 2017. There was no impact on the Company's financial statements as a result of the adoption.

(ii) New Accounting Standards Not Yet Effective

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, which superseded existing revenue recognition guidance under current U.S. GAAP. The standard is a comprehensive revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. In doing so, among other things, companies will generally need to use more judgment and make more estimates than under the current guidance. Recently, the FASB has issued guidance clarifying certain topics such as (i) gross versus net revenue reporting, (ii) identifying performance obligations and licensing, (iii) accounting for shipping and handling fees and costs, and (iv) accounting for consideration given by a vendor to a customer.

The standard permits two methods of adoption: (i) retrospectively to each prior reporting period presented (the full retrospective method), or (ii) retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial application (the cumulative catch-up transition method). The Company currently anticipates adopting the standard using the full retrospective method to restate each prior reporting period presented.

The standard will be effective for Echelon in the fiscal year beginning January 1, 2018. The Company currently anticipates the standard will have a material impact on its financial statements and disclosures, and continues to make progress in assessing all potential impacts of the standard, including any impacts of recently issued amendments. The Company currently believes the most significant impact of adopting the new standard will relate to its accounting for sales made to distributors under agreements that contain a limited right to return unsold products and price adjustment provisions. Under the existing revenue guidance, the Company has historically concluded that the price to these distributors is not fixed or determinable at the time it delivers products to them. Accordingly, revenue from sales to these distributors has not historically been recognized until the distributor resells the product. By contrast, under the new standard, the Company expects to recognize revenue, including estimates for applicable variable consideration, predominately at the time of shipment to these distributors, thereby accelerating the timing of revenue for products sold through the distribution channel. During the year ended December 31, 2016, the Company recognized approximately $14.7 million of revenue sold through such distributors.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which requires, among other things, the recognition of lease assets and lease liabilities on the balance sheet by lessees for certain leases classified as operating leases under previous GAAP. ASU 2016-02 is effective for annual and interim periods beginning after December 15, 2018. ASU 2016-02 mandates a modified retrospective transition method with early adoption permitted. The Company is currently evaluating the effect that ASU 2016-02 will have on its consolidated financial statements and related disclosures.

Revenue Recognition

The Company's revenues are derived from the sale and license of its products and, to a lesser extent, from fees associated

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with training, technical support, and custom software design services offered to its customers. Product revenues consist of revenues from hardware sales and software licensing arrangements. Service revenues consist of product technical support (including, in limited circumstances, software post-contract support services) and training.

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery to the customer's carrier (and acceptance, as applicable) has occurred, the sales price is fixed or determinable, collectability is probable, and there are no post-delivery obligations. For non-distributor hardware sales, including sales to third party manufacturers, these criteria are generally met at the time of delivery to the customer's carrier. However, for arrangements that contain contractual acceptance provisions, revenue recognition may be delayed until acceptance by the customer or the acceptance provisions lapse unless the Company can objectively demonstrate that the contractual acceptance criteria have been satisfied, which is generally accomplished by establishing a history of acceptance for the same or similar products. For sales made to the Company's distributor partners, revenue recognition criteria are generally met at the time the distributor sells the products through to its end-use customer. Service revenue is recognized as the training services are performed, or ratably over the term of the support period.

The Company accounts for the rights of return, price protection, rebates, and other sales incentives offered to distributors of its products as a reduction in revenue. With the exception of sales to certain distributors, the Company's customers are generally not entitled to return products for a refund. For sales to certain distributors, due to contractual rights of return and other factors that impact its ability to make a reasonable estimate of future returns and other sales incentives, revenues are not recognized until the distributor has shipped its products to the end customer.

Deferred Revenue and Deferred Cost of Revenues

Deferred revenue consists of amounts billed or payments received in advance of revenue recognition. Deferred cost of revenues related to deferred product revenues includes direct product costs and applied overhead. Deferred cost of revenues related to deferred service revenues includes direct labor costs and applied overhead. Once all revenue recognition criteria have been met, the deferred revenues and associated cost of revenues are recognized.

Restricted Investments

As of March 31, 2017, restricted investments consist of balances maintained by the Company with an investment advisor in money market funds and permitted treasury bills. These balances represent collateral for a $1.0 million operating line of credit issued to the Company by its primary bank for credit card purchases. Because the Company's agreement with the lender prevents the Company from withdrawing these funds, they are considered restricted.

Fair Value Measurements

The Company measures at fair value its cash equivalents and available-for-sale investments using a valuation hierarchy based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's own assumptions. These two types of inputs have created the following fair value hierarchy:

- Level 1 - Quoted prices for identical instruments in active markets;
- Level 2 - Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets; and
- Level 3 - Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

This hierarchy requires the Company to minimize the use of unobservable inputs and to use observable market data, if available, when estimating fair value. Other than cash and money market funds, the Company's only financial assets and liabilities required to be measured at fair value on a recurring basis at March 31, 2017, are its fixed income available-for-sale securities. See Note 2 of these Notes to condensed consolidated financial statements for a summary of the input levels used in determining the fair value of these assets and liabilities as of March 31, 2017.

Long-Lived Assets

We perform periodic reviews to determine whether facts and circumstances exist that would indicate that the carrying amounts of property, plant and equipment and long-lived intangible assets might not be fully recoverable. If facts and circumstances indicate that the carrying amount of these assets might not be fully recoverable, we compare projected undiscounted net cash flows associated with the related asset or group of assets over their estimated remaining useful lives

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against their respective carrying amounts. In the event that the projected undiscounted cash flows are not sufficient to recover the carrying value of the assets, the assets are written down to their estimated fair values based on the expected discounted future cash flows attributable to the assets. Evaluation of impairment of property, plant and equipment and long-lived intangible assets requires estimates in the forecast of future operating results that are used in the preparation of the expected future undiscounted cash flows. Actual future operating results and the remaining economic lives of our property, plant and equipment and long-lived intangible assets could differ from our estimates used in assessing the recoverability of these assets. These differences could result in impairment charges, which could have a material adverse impact on our results of operations.

Contingent Consideration

During the quarter ended March 31, 2016, the contingent consideration payable to Lumewave's shareholders, which the Company recognized upon its purchase of Lumewave in August 2014, decreased by approximately $318,000. This reduction was due to the Company's determination that it was no longer probable that the minimum targets specified in the purchase agreement would be met due to sales force transitions and scheduling delays for some of our larger lighting projects. Accordingly, the Company reduced the associated liability to $0 as of March 31, 2016. This resulted in a $318,000 adjustment, which was recorded as a reduction to general and administrative expenses in the Company's condensed consolidated statements of operations.

2. Financial Instruments:

The Company’s financial instruments consist of cash equivalents, restricted investments, short-term investments, accounts receivable, and accounts payable. The carrying value of the Company’s financial instruments approximates fair value. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of investments, which are classified as either cash equivalents, restricted investments, or short-term investments, and accounts receivable. With respect to its investments, the Company has an investment policy that limits the amount of credit exposure to any one financial institution and restricts placement of the Company’s investments to financial institutions independently evaluated as highly creditworthy. With respect to its accounts receivable, the Company performs ongoing credit evaluations of each of its customers’ financial condition. For a customer whose credit worthiness does not meet the Company’s minimum criteria, the Company may require partial or full payment prior to shipment. Alternatively, prior to shipment, customers may be required to provide the Company with an irrevocable letter of credit or arrange for some other form of coverage to mitigate the risk of uncollectibility, such as a bank guarantee. Additionally, the Company establishes an allowance for doubtful accounts and sales return allowances based upon factors surrounding the credit risk of specific customers, historical trends, and other available information.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

On a recurring basis, the Company measures certain of its financial assets, namely its cash equivalents and available-for-sale investments, at fair value. The fair value of the Company’s financial assets measured at fair value on a recurring basis was determined using the following inputs at March 31, 2017 (in thousands):

	Fair Value Measurements at Reporting Date Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds (1)	$4,536	$ 4,536	$ —	$ —

U.S. government securities[(2)]	13,227	—	13,227	—
Total	$17,763	$ 4,536	$ 13,227	$ —

The fair value of the Company's financial assets measured at fair value on a recurring basis was determined using the following inputs at December 31, 2016 (in thousands):

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	Fair Value Measurements at Reporting Date Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds [1]	$4,513	$ 4,513	$ —	$ —
U.S. government securities[2]	13,233	—	13,233	—
Total	$17,746	$ 4,513	$ 13,233	$ —

[1] Included in cash and cash equivalents in the Company's condensed consolidated balance sheets

[2] Represents the portfolio of available for sale securities that is included in restricted investments and short-term investments in the Company's condensed consolidated balance sheets

Cash equivalents consist of either investments with remaining maturities of three months or less at the date of purchase, or money market funds for which the carrying amount is a reasonable estimate of fair value.

The Company's available-for-sale securities consist of U.S. government securities with a minimum and weighted average credit rating of A-1+. 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. However, the Company classifies all of its fixed income available-for-sale securities as having Level 2 inputs. 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 Company's procedures include controls to ensure that appropriate fair values are recorded by comparing prices obtained from a third party independent source.

As of March 31, 2017, the Company's available-for-sale securities had contractual maturities of six months and an average remaining term to maturity of three months. As of March 31, 2017, the amortized cost basis, aggregate fair value, and gross unrealized holding gains and losses of the Company's short-term investments by major security type were as follows (in thousands):

	Amortized Cost	Aggregate Fair Value	Unrealized Holding Gains	Unrealized Holding Losses
U.S. government securities	$ 11,978	$ 11,975	$ —	$ 3

The amortized cost basis, aggregate fair value and gross unrealized holding gains and losses for the Company's available-for-sale short-term investments, by major security type, were as follows as of December 31, 2016 (in thousands):

	Amortized Cost	Aggregate Fair Value	Unrealized Holding Gains	Unrealized Holding Losses
U.S. government securities	$ 11,984	$ 11,983	$ —	$ 1

Market values were determined for each individual security in the investment portfolio. The Company reviews its investments on a regular basis to evaluate whether or not any have experienced an other-than-temporary decline in fair value.

3. Earnings Per Share:

The computation of diluted net loss per share does not include stock options, performance shares, and contingently issuable shares of 960,606 and 375,025 for the three months ended March 31, 2017 and 2016, respectively, because the effect of their inclusion would be anti-dilutive based on their respective exercise prices.

4. Stockholders’ Equity and Employee Stock Option Plans:

On April 17, 2017, the Company's Board of Directors approved an amendment to the Tax Benefit Preservation Plan (the "Tax Plan"), dated as of April 22, 2016, by and between the Company and Computershare Inc., as rights agent (the “Rights Agent”), to extend the Final Expiration Date (as such term is defined in the Tax Plan) to April 25, 2019.

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Stock-based Compensation Expense

The following table summarizes stock-based compensation expense for the three months ended March 31, 2017 and 2016 and its allocation within the condensed consolidated statements of operations (in thousands):

	Three Months Ended March 31,	
	2017	2016
Cost of revenues	$29	$11
Product development	124	(1)
Sales and marketing	102	(121)
General and administrative	212	110
Total	$467	$(1)

The negative expense amounts reflected in the three months ended March 31, 2016, are primarily due to the reversal of previously recognized expense resulting from the forfeiture of equity awards for certain employees whose employment terminated during the respective periods.

Stock Award Activity

There were no options exercised during the three months ended March 31, 2017 and 2016.

The total fair value of RSUs vested and released during the three months ended March 31, 2017 was $49,000. The total fair value of RSUs vested and released during the three months ended March 31, 2016 was approximately $4,000. The fair value is calculated by multiplying the fair market value of the Company’s common stock on the vesting date by the number of shares of common stock issued upon vesting.

5. Significant Customers:

The Company markets its products and services throughout the world to original equipment manufacturers (OEMs) and systems integrators in the building, industrial, transportation, utility/home, and other automation markets. During the three months ended March 31, 2017 and 2016, the Company had two customers that accounted for a significant portion of its revenues: Avnet Europe Comm VA (“Avnet”), the Company’s primary distributors of its IIoT products in Europe and Japan, and Enel Distribuzione Spa ("Enel"), an Italian utility company. For the three months ended March 31, 2017 and 2016, the percentage of the Company’s revenues attributable to sales made to these customers was as follows:

	Three Months Ended March 31,	
	2017	2016
Avnet	29.6%	26.8%
Enel	— %	15.2%
Total	29.6%	42.0%

6. Commitments and Contingencies:

Legal Actions

From time to time, in the ordinary course of business, the Company may be subject to certain legal proceedings, claims, investigations, and other proceedings, including claims of alleged infringement of third-party patents and other intellectual property rights, and commercial, employment, or other matters. In accordance with generally accepted accounting principles, the Company makes a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. While the Company believes it has adequately provided for such contingencies as of March 31, 2017, the amounts of which were immaterial, it is possible that the Company's results of operations, cash flows, and financial position could be harmed by the resolution of any such outstanding claims.

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Line of Credit
As of March 31, 2017, the Company maintained an operating credit line of $1.0 million with its primary bank for company credit card purchases. This line of credit is secured by a collateral of the first priority on $1.3 million of the Company's investments (presented as restricted investments in the condensed consolidated balance sheets). The restricted investments are classified as current assets due to the contractual duration of the underlying credit agreement.

7. Accumulated Other Comprehensive Income (Loss), Net of Tax (Amounts in thousands):

	Foreign currency translation adjustment	Unrealized gain (loss) on available-for-sale securities	Accumulated Other Comprehensive Income (Loss)
Beginning balance at December 31, 2016	$ (2,435)	$ (2)	$ (2,437)
Change during January - March 2017	83	(1)	82
Balance at March 31, 2017	$ (2,352)	$ (3)	$ (2,355)

None of the above amounts have been reclassified in the condensed consolidated statement of operations.

8. Inventories:

Inventories are stated at the lower of cost (first in, first out) or market and include material, labor and manufacturing overhead. When required, provisions are made to reduce excess and obsolete inventories to their estimated net realizable value. Inventories consist of the following (in thousands):

	March 31, 2017	December 31, 2016
Purchased materials	$ 107	$ 148
Finished goods	2,409	2,422
	$ 2,516	$ 2,570

9. Accrued Liabilities:

Accrued liabilities consist of the following (in thousands):

	March 31, 2017	December 31, 2016
Accrued payroll and related costs	$ 814	$ 1,299
Warranty reserve	130	118
Restructuring charges	225	273
Other accrued liabilities	381	484
	$ 1,550	$ 2,174

10. Segment Disclosure:

ASC Topic 280, Segment Reporting, establishes standards for reporting information about operating segments, products and services, geographic areas of operations and major customers. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing business performance. The Company’s chief operating decision-making group is the Executive Staff, which is comprised of the Chief Executive Officer and his direct reports (CODM). The Company operates in one principal industry segment - the IIoT segment, which is its reportable segment.

The Company operates in three main geographic areas: the Americas; Europe, Middle East and Africa ("EMEA"); and Asia Pacific / Japan ("APJ"). Each geographic area provides products and services to the Company's customers located in the respective region. The Company's long-lived and other assets include property and equipment, acquired intangible assets, and deposits on its leased facilities. Long-lived assets are attributed to geographic areas based on the country where the assets are

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located. As of March 31, 2017 and December 31, 2016, long-lived assets of approximately $2.1 million and $2.2 million, respectively, were domiciled in the United States. Long-lived assets for all other locations are not material to the condensed consolidated financial statements.

In North America, the Company sells its products primarily through a direct sales organization and select third-party electronics representatives. Outside North America, the Company sells its products through direct sales organizations, value-added resellers, and local distributors, primarily in EMEA and APJ. Revenues are attributed to geographic areas based on the country where the products are shipped to or the services are delivered. Summary revenue information by geography for the three months ended March 31, 2017 and 2016 is as follows (in thousands):

	Three Months Ended March 31,	
	2017	2016
Americas	$3,170	$2,555
EMEA	2,875	4,672
APJ	1,754	1,420
Total	$7,799	$8,647

For information regarding the Company’s major customers, please refer to Note 5, Significant Customers.

11. Income Taxes:

The provision for (benefit from) income taxes for the three months ended March 31, 2017 and 2016 was $(6,000) and $6,000, respectively. The difference between the statutory rate and the Company’s effective tax rate is primarily due to the impact of foreign taxes, changes in the valuation allowance on deferred tax assets, and changes in the accruals related to unrecognized tax benefits.

As of March 31, 2017 and December 31, 2016, the Company had gross unrecognized tax benefits of approximately $9.3 million and $9.2 million, respectively, of which $355,000 and $364,000, respectively, if recognized, would impact the effective tax rate on income from continuing operations. The Company’s policy is to recognize interest and/or penalties related to unrecognized tax benefits in income tax expense. As of March 31, 2017 and December 31, 2016, the Company had accrued $48,000 and $62,000, respectively, for interest and penalties. The $14,000 reduction in interest and penalties on gross unrecognized tax benefits during the three months ended March 31, 2017 was primarily attributable to the expiration of the statute of limitations in certain foreign jurisdictions.

12. Related Parties:

In June 2000, the Company entered into a stock purchase agreement with Enel pursuant to which Enel purchased 300,000 newly issued shares of its common stock for $130.7 million. The closing of this stock purchase occurred on September 11, 2000. At the closing, Enel had agreed that it would not, except under limited circumstances, sell or otherwise transfer any of those shares for a specified time period. That time period expired September 11, 2003. To the Company’s knowledge, Enel has disposed of none of its 300,000 shares. Under the terms of the stock purchase agreement, Enel has the right to nominate one member of the Company’s board of directors. While a representative of Enel served on the board until March 14, 2012, no Enel representative is presently on the board.

In October 2006, the Company entered into a new development and supply agreement with Enel. Under the development and supply agreement, Enel and its contract manufacturers purchase additional electronic components and finished goods from the Company. The development and supply agreement expired in March 2016.

For the three months ended March 31, 2017 and 2016, the Company recognized revenue from products sold to Enel and its designated manufacturers of approximately $0 and $1.3 million, respectively.

As of March 31, 2017 and December 31, 2016, none of the Company’s total accounts receivable balance related to amounts owed by Enel and its designated manufacturers.

13. Joint Venture:

On March 23, 2012, the Company entered into an agreement with Holley Metering Limited (“Holley Metering”), a designer and manufacturer of energy meters in China, to create a joint venture, Zhejiang Echelon-Holley Technology

Co., Ltd.

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("Echelon-Holley"). The joint venture's intended focus was on the development and sales of smart energy products for China and rest-of-world markets. The Company has a 51.0% ownership interest in the joint venture and exercises controlling influence. Therefore, Echelon-Holley's accounts are included in the Company's condensed consolidated financial statements as of March 31, 2017 and 2016, and for the three months then ended. Holley Metering's interests in Echelon-Holley's net assets are reported in the non-controlling interest in subsidiary on the condensed consolidated balance sheet as of March 31, 2017. Net loss attributable to the non-controlling interest in Echelon-Holley was $0 and $0 during the three months ended March 31, 2017 and 2016, respectively.

As of March 31, 2017, Echelon and Holley Metering had contributed in cash a total of approximately $4.0 million in Share Capital, as defined in the joint venture agreement, to Echelon-Holley in proportion to their respective ownership interests.

In connection with the decision to sell the Grid business announced in the third quarter of 2014, the Company undertook a process to sell the remaining net assets of the joint venture and recorded the net assets and liabilities of the joint venture at the lower of their carrying amount or fair value less cost to sell, and classified them as held for sale on the accompanying balance sheet at December 31, 2014. The major classes of assets and liabilities that were classified as held for sale were inventory, deferred revenues and the related deferred costs of sales, and accrued liabilities.

During the quarter ended September 30, 2015, the Company concluded that it would no longer pursue a sale, but would instead work with Holley Metering to shut the joint venture down. The remaining net assets of the joint venture were immaterial as of September 30, 2015. As of March 31, 2017, the Company is continuing to work with Holley Metering to complete the shut-down.

14. Restructuring:

During the fourth quarter of 2016, the Company undertook restructuring actions affecting approximately 7 employees to be terminated between October 2016 and September 2017, as part of an overall plan to reshape the Company for the future. In connection with this restructuring, the Company recorded restructuring charges of approximately $286,000 related to termination benefits for these personnel during the year ended December 31, 2016.

The following table sets forth a summary of restructuring activities related to the Company's 2016 restructuring program (in thousands):

	December 31, 2016	Costs Incurred	Cash Payments	March 31, 2017
Termination benefits	$ 273	$ —	$ (48)	$ 225

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

The following discussion should be read in conjunction with the condensed consolidated financial statements and notes thereto included elsewhere in this Quarterly Report. The following discussion contains predictions, estimates, and other forward-looking statements that involve a number of risks and uncertainties about our business. These statements may be identified by the use of words such as “we believe,” “expect,” “anticipate,” “intend,” “plan,” “goal,” “contin “may,” "target"," and similar expressions. Forward-looking statements include statements that refer to projections of our future financial performance, our anticipated growth and trends in our businesses, and other characterizations of future events or circumstances. In particular, these statements include statements such as: our plan to focus our product development spend in our foundational technology to broaden the applicability of our control networking platform into new markets; our predictions about the smart energy market, increased pricing pressures and worldwide macro-economic conditions; our projections of IIoT revenues; our expectations on shipments to Enel and revenues from Enel; our expectation that we will achieve a return on our investment of resources into our products; estimates of our future gross margins and factors affecting our gross margins; statements regarding reinvesting a portion of our earnings from foreign operations; plans to use our cash reserves to strategically acquire other companies, products, or technologies; our projections of our combined cash, cash equivalent and short term investment balance; the sufficiency of our cash reserves to meet cash requirements; our expectations that our IIoT revenues will not fluctuate significantly from foreign currency sales; estimates of our interest income and expense; our belief that we have adequately provided for legal contingencies; and our belief that we have made adequate provisions for tax exposure and legal matters. Such statements are based on our current expectations and could be affected by the uncertainties and risk factors described throughout this filing and particularly in the “Factors That May Affect Future Results of Operations” section. Therefore, our actual results may differ materially and adversely from those expressed in any forward-looking statements. We undertake no obligation to review or update publicly any forward-looking statements for any reason, except as required by law.

EXECUTIVE OVERVIEW

Echelon Corporation was incorporated in California in February 1988 and reincorporated in Delaware in January 1989. We went public on the NASDAQ market under the symbol "ELON" in July 1998. We are based in Santa Clara, California, and maintain offices in several foreign countries throughout Europe and Asia. Our products enable "things" in commercial and industrial applications — such as air conditioners, lighting, manufacturing equipment, electricity meters, light switches, thermostats, and valves — to be made “smart” and inter-connected, part of an emerging market known as the Industrial Internet of Things ("IIoT").

Our widely deployed, open standard, multi-vendor energy control networking platform powers applications for smart cities, smart buildings, and smart campuses that help customers save on their energy usage; prevent failure or reduce failure duration; reduce carbon footprint; improve safety, comfort, and convenience; and more. Our solutions, which feature a programmable, distributed intelligence architecture that is designed for both high reliability and fast action, are implemented over the powerline or through wireless communication systems for flexibility in installation and operation.

We offer two product lines, the first of which is comprised of chips, modules, gateways, and design and management software that enables Original Equipment Manufacturers ("OEMs") to quickly design and bring to market interoperable smart systems for their commercial and industrial customers. These products are generally marketed under the LONWORKS and IzoT brand names. We refer to revenues from these products as "embedded systems" revenues.

Our second product line is a range of control networking solutions designed specifically for the lighting market within the IIoT. As this market continues its transition to solid state lighting, or LEDs, we have focused our initial offerings on outdoor lighting control solutions, as we believe that the incremental energy savings, maintenance benefits, and safety improvements resulting from the implementation of controls offers a compelling return on investment. In addition, due to the abundance of lighting fixtures in most locations, the lighting control system can host a variety of "smart" applications that can further improve safety and comfort on roadways, in parking lots and garages, on campuses, in tunnels, and more. Our lighting control solutions consist of wired and wireless control nodes placed at the lighting fixtures of a wide variety of manufacturers, “smart” gateways for interconnecting the control nodes, and a software-based Central Management System, or CMS, which is used for startup, commissioning, management, and monitoring of the lighting network. These solutions are sold to end users typically

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through manufacturers' representatives, energy services companies, and distributors, and are generally marketed under the LumInsight and Lumewave by Echelon brand names. We refer to revenues from these products as "outdoor lighting" revenues.

The following tables provide an overview of key financial metrics for the three months ended March 31, 2017 and 2016 that our management team focuses on in evaluating our financial condition and operating performance (in thousands, except percentages).

	Three Months Ended March 31,			
	2017	2016	$ Change	% Change
Revenues	$7,799	$ 8,647	$(848)	(9.8)%
Gross margin	57.4 %	56.0 %	---	1.4 ppt
Operating expenses	$5,613	$ 5,506	$107	1.9 %
Net loss	$(1,199)	$ (875)	$(324)	37.0 %
	Balance as of			
	March 31, 2017	December 31, 2016	$ Change	% Change
Cash, cash equivalents, and short-term investments *	$21,552	$ 23,036	$(1,484)	(6.4)%

* As of March 31, 2017 and December 31, 2016, includes $1.3 million of restricted investments presented separately on condensed consolidated balance sheet

- Revenues: Our revenues decreased by 9.8% during the first quarter of 2017 as compared to the same period in 2016. The decrease in revenues between the two quarterly periods was mainly due to a decrease in sales of components sold to Enel. For further analysis please see the topic Revenues in the Results of Operations discussion later in this section.
- Gross margin: Our gross margins increased by 1.4 percentage points during the first quarter of 2017 as compared to the same period in 2016. These fluctuations were primarily due to a change in the mix of products sold. For further analysis please see the topic Gross Profit and Gross Margin in the Results of Operations discussion later in this section.
- Operating expenses: Our operating expenses increased by 1.9% during the three months ended March 31, 2017, respectively, as compared to the same period in 2016. The increase was primarily due to the fact that, during the first quarter of 2016, we recorded a $318,000 reduction in the accrual for contingent consideration we expected to owe the former Lumewave shareholders, which reduced our general and administrative expenses. Excluding that expense reduction, our operating expenses declined by approximately $211,000 during the first three months of 2017 as compared to the same period in 2016. This reduction was primarily the result of a decrease in fees paid to third party service providers. For further analysis please see the topic Operating Expenses in the Results of Operations discussion later in this section.
- Net loss: We generated a net loss of $1.2 million during the first quarter of 2017 compared to $875,000 during the same period in 2016. This increase in our net loss was mainly attributable to lower overall revenues and gross profits, and to a lesser extent, an increase in operating expenses.
- Cash, cash equivalents, and short-term investments: During the first three months of 2017, our cash, cash equivalents, and short-term investment balance decreased by 6.4%, from $23.0 million at December 31, 2016 to $21.6 million at March 31, 2017. This decrease was primarily the result of cash used in operations of $1.5 million (driven primarily by our net loss of $1.2 million).

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CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. For further information on our significant accounting policies, see the Notes to our condensed consolidated financial statements included in Part 1 of this Report. Our critical accounting policies and estimates are also described in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 1, “Significant Accounting Policies” of Notes to consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2016, which we filed with the Securities and Exchange Commission in March 2017. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to our revenues, stock-based compensation, allowance for doubtful accounts, inventories, and commitments and contingencies. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

During the three months ended March 31, 2017, there were no material changes to our critical accounting policies or in the matters for which we make critical accounting estimates in the preparation of our condensed consolidated financial statements as compared to those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016.

RESULTS OF OPERATIONS

The following table reflects the percentage of total revenues represented by each item in our condensed consolidated statements of operations for the three months ended March 31, 2017 and 2016:

	Three Months Ended March 31,	
	2017	2016
Revenues	100.0 %	100.0 %
Cost of revenues	42.6	44.0
Gross profit	57.4	56.0
Operating expenses:		
Product development	28.6	25.4
Sales and marketing	18.7	15.1
General and administrative	24.7	23.2
Total operating expenses	72.0	63.7
Loss from operations	(14.6)	(7.7)
Interest and other income (expense), net	(0.8)	(2.3)
Loss before provision for income taxes	(15.5)	(10.0)
Income tax expense	(0.1)	0.1
Net loss	(15.4)%	(10.1)%

Revenues

Total revenues

	Three Months Ended			
(Dollars in thousands)	March 31, 2017	March 31, 2016	2017 over 2016 $	2017 over 2016 %

			Change	Change
Total revenues	$7,799	$8,647	$(848)	(9.8)%

Our revenues are primarily comprised of sales of our hardware products, and to a lesser extent, revenues we generate from sales of our software products and from our customer support and training offerings. Included in these totals are components we sell to Enel.

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Excluding sales to Enel, a related party, which are discussed more fully below, our revenues increased during the three months ended March 31, 2017, as compared to the same period in 2016, by $464,000, or 6%. This increase was primarily due to increases in sales made to customers in the Americas and APJ regions, partially offset by a reduction in sales made to customers in the EMEA region. We have seen a loss in market share over the last several years due primarily to reduced investment in research and development and marketing, especially in our LONWORKS portfolio of products, which has caused a decrease in our embedded system revenues. In addition, the continued poor economic conditions in the EMEA region have also contributed to the year-over-year decline. Lastly, sales of components we make to our former Grid division also declined during the quarter ended March 31, 2017 as compared to the same period in 2016.

The portion of our revenues conducted in currencies other than the United States dollar, principally the Japanese Yen, was about 5.1% for the three months ended March 31, 2017 and 2.7% for the same period in 2016. Our revenues will continue to be subject to fluctuations in the exchange rates between the United States dollar and the foreign currencies in which we sell these products and services. In general, if the dollar were to weaken against these currencies, our revenues from those foreign currency sales, when translated into United States dollars, would increase. Conversely, if the dollar were to strengthen against these currencies, our revenues from those foreign currency sales, when translated into United States dollars, would decrease. The extent of this exchange rate fluctuation increase or decrease will depend on the amount of sales conducted in these currencies and the magnitude of the exchange rate fluctuation from year to year. To date, we have not hedged any of these foreign currency risks. We do not currently expect that, during the remainder of 2017, the amount of our revenues conducted in these foreign currencies will fluctuate significantly from prior year levels. Given the historical and expected future level of sales made in foreign currencies, we do not currently plan to hedge against these currency rate fluctuations. However, if the portion of our revenues conducted in foreign currencies were to grow significantly, we would re-evaluate these exposures and, if necessary, enter into hedging arrangements to help minimize these risks.

Enel project revenues (included in total revenues)

	Three Months Ended			
(Dollars in thousands)	March 31, 2017	March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change
Enel project revenues	$—	$1,312	$(1,312)	(100.0)%

In October 2006, we entered into a development and supply agreement with Enel. The development and supply agreement expired in March 2016. Under the development and supply agreement, Enel purchased metering kit products from us. Enel Project revenues recognized during the three months ended March 31, 2016 were driven primarily by shipments of metering kits under the development and supply agreement.

We sold our products to Enel and its designated manufacturers in U.S. dollars. Therefore, the associated revenues are not subject to foreign currency risks. We do not currently expect that there will be any significant shipments to Enel in 2017. As such, we expect our revenues from Enel will decrease significantly in 2017 as compared to 2016.

Gross Profit and Gross Margin

	Three Months Ended			
(Dollars in thousands)	March 31, 2017	March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change

Gross Profit	$4,473	$4,842	$ (369)	(7.6)%
Gross Margin	57.4%	56.0%	N/A	1.4

Gross profit is equal to revenues less cost of revenues. Cost of revenues associated with sales of our products includes direct costs associated with the purchase of components, sub-assemblies, and finished goods, as well as indirect costs such as allocated labor and overhead; costs associated with the packaging, preparation, and shipment of products; and charges related to warranty and excess and obsolete inventory reserves. Cost of revenues associated with sales of our services includes employee-

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related costs such as salaries and fringe benefits as well as other direct and indirect costs incurred in providing training and customer support. Gross margin is equal to gross profit divided by revenues.
Our gross margins increased by 1.4 percentage points for the three months ended March 31, 2017, as compared to the same periods in 2016. This increase is primarily due to a change in the mix of products sold.

Our future gross margins will continue to be affected by several factors, including, but not limited to: overall revenue levels, changes in the mix of products sold, changes in our distribution strategy and use of distributors, changes in the prices charged by our suppliers, periodic charges related to excess and obsolete inventories, warranty expenses, introductions of cost reduced versions of our products, changes in the average selling prices of the products we sell, purchase price variances, and fluctuations in the level of indirect overhead spending. In addition, the impact of foreign exchange rate fluctuations and labor rates may affect our gross margins in the future. We currently outsource the manufacturing of most of our products requiring assembly to CEMs located primarily in China. To the extent labor rates were to rise further, or to the extent the U.S. dollar were to weaken against the Chinese currency, or other currencies used by our CEMs, our costs for the products they manufacture could rise, which would negatively affect our gross margins.

Operating Expenses
Product Development

	Three Months Ended			
(Dollars in thousands)	March 31, 2017	March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change
Product Development	$2,227	$2,193	$ 34	1.6 %

Product development expenses consist primarily of payroll and related expenses for development personnel, facility costs, expensed material, fees paid to third party service providers, depreciation and amortization, and other costs associated with the development of new technologies and products.
Our product development expenses remained relatively unchanged during the three months ended March 31, 2017 as compared to the same period in 2016.
Sales and Marketing

	Three Months Ended			
(Dollars in thousands)	March 31, 2017	March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change
Sales and Marketing	$1,462	$1,302	$ 160	12.3 %

Sales and marketing expenses consist primarily of payroll, commissions, and related expenses for sales and marketing personnel, travel and entertainment, facilities costs, advertising and product promotion, and other costs associated with our sales and marketing activities.
Our sales and marketing expenses increased by 12% during the three months ended March 31, 2017, as compared to the same period in 2016. The primary cause of this increase was an increase in non-cash equity compensation charges for our sales and marketing personnel.
General and Administrative

	Three Months Ended			
(Dollars in thousands)	March 31,	March 31,	2017 over	2017 over

	2017	2016	2016 $ Change	2016 % Change
General and Administrative	$1,924	$2,011	$ (87)	(4.3)%

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General and administrative expenses consist primarily of payroll and related expenses for executive, finance, and administrative personnel, professional fees for legal and accounting services rendered to the company, facility costs, insurance, and other general corporate expenses.

General and administrative expenses decreased modestly during the three months ended March 31, 2017, as compared to the same period in 2016. As mentioned earlier, included in our results for the quarter ended March 31, 2016 was a reduction of the contingent consideration we would owe to the former Lumewave shareholders. During the quarter ended March 31, 2016, we concluded that it was no longer probable that we would owe any further contingent consideration to the former Lumewave shareholders at the conclusion of the two-year period ending in August 2016. As a result, we reduced this accrual by the remaining $318,000 balance, which was recorded as a reduction to our general and administrative expenses. Excluding this reduction, our general and administrative expenses decreased by $405,000, which was driven in large part by a reduction of fees paid to third party service providers, including our registered independent accountants.

Interest and Other Income (Expense), Net

(Dollars in thousands)	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change
Interest and Other Income (Expense), Net	$(65)	$(205)	$ 140	(68.3)%

Interest and other income (expense), net, primarily reflects interest earned by our company on cash and short-term investment balances as well as foreign exchange translation gains and losses related to short-term intercompany balances.

Interest and other expense, net, decreased by $140,000 during the three months ended March 31, 2017 as compared to the same period in 2016. This fluctuation was primarily attributable to the fact that, during the first quarter of 2017, we recognized approximately $88,000 of foreign currency translation losses, whereas in the first quarter of 2016, we recognized foreign currency translation losses of approximately $221,000. These fluctuations are primarily attributable to our foreign currency denominated short-term intercompany balances. We account for translation gains and losses associated with these balances by reflecting these amounts as either other income or loss in our condensed consolidated statements of operations. During periods when the U.S. dollar weakens in value against these foreign currencies, the associated translation losses negatively impact other income. Conversely, when the U.S. dollar strengthens, the resulting translation gains favorably impact other income.

We do not currently anticipate interest income on our investment portfolio will improve during 2017 as we expect interest rates to remain historically low. Future gains or losses associated with translating our foreign currency denominated short-term intercompany balances will depend on exchange rates in effect at the time of translation.

Income Tax Expense

(Dollars in thousands)	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016	2017 over 2016 $ Change	2017 over 2016 % Change
Income Tax Expense (Benefit)	$(6)	$ 6	$ (12)	200.0 %

The income tax expense (benefit) for the three months ended March 31, 2017 was $(6,000) compared to $6,000 for the same period in 2016. The difference between the statutory rate and our effective tax rate is primarily due to the impact of foreign taxes, changes in the valuation allowance on deferred tax assets, and changes in the accruals related to unrecognized tax benefits.

OFF-BALANCE-SHEET ARRANGEMENTS AND OTHER CONTRACTUAL OBLIGATIONS

Off-Balance-Sheet Arrangements. We have not entered into any transactions with unconsolidated entities whereby we have financial guarantees, subordinated retained interests, derivative instruments, or other contingent arrangements that expose our company to material continuing risks, contingent liabilities, or any other obligation under a variable interest in an unconsolidated entity that provides financing, liquidity, market risk, or credit risk support to us.

Lease Commitments. In September 2015, we entered into a lease agreement for our corporate headquarters facility in Santa Clara, California. This lease commenced in November 2015 and will expire in July 2019. In addition, we lease facilities under operating leases for our sales, marketing, and product development personnel located elsewhere within the United States and in several foreign countries throughout Europe and Asia. These operating leases expire on various dates through 2019, and in some instances are cancelable with advance notice. Lastly, we also lease certain equipment and, for some of our sales personnel, automobiles. These operating leases are generally less than five years in duration.

Purchase Commitments. We utilize several contract manufacturers who manufacture and test our products requiring assembly. These contract manufacturers acquire components and build product based on demand information supplied by us in the form of purchase orders and demand forecasts. These purchase orders and demand forecasts generally cover periods up to twelve months, and in rare cases, up to eighteen months. We also obtain individual components for our products from a wide variety of individual suppliers. We generally acquire these components through the issuance of purchase orders, and in some cases through demand forecasts, both of which cover periods up to twelve months.

We also utilize purchase orders when procuring capital equipment, supplies, and services necessary for our day-to-day operations. These purchase orders generally cover periods ranging up to twelve months, but in some instances cover a longer duration.

Indemnifications. In the normal course of business, we provide indemnifications of varying scope to customers against claims of intellectual property infringement made by third parties arising from the use of our products. Historically, costs related to these indemnification provisions have not been significant. However, we are unable to estimate the maximum potential impact of these indemnification provisions on our future results of operations.

As permitted under Delaware law, we have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is, or was serving, at our request in such capacity. The indemnification period covers all pertinent events and occurrences during the officer's or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have director and officer insurance coverage that would enable us to recover a portion of any future amounts paid. We believe the estimated fair value of these indemnification agreements in excess of the applicable insurance coverage is minimal.

Royalties. We have certain royalty commitments associated with the shipment and licensing of certain products. Royalty expense is generally based on a U.S. dollar amount per unit shipped or a percentage of the underlying revenue. Royalty expense, which is recorded as cost of revenues in our condensed consolidated statements of operations, was approximately $80,000 for the three months ended March 31, 2017, and $56,000 for the same period in 2016.

We will continue to be obligated for royalty payments in the future associated with the shipment and licensing of certain of our products. While we are currently unable to estimate the maximum amount of these future royalties, such amounts will continue to be dependent on the number of units shipped or the amount of revenue generated from these products.

Taxes. We conduct our operations in many tax jurisdictions throughout the world. In many of these jurisdictions, non-income based taxes such as property taxes, sales and use taxes, and value-added taxes are assessed on Echelon's operations in that particular location. While we strive to ensure compliance with these various non-income based tax filing requirements, there have been instances where potential non-compliance exposures have been identified. In accordance with generally accepted accounting principles, we make a provision for these exposures when it is both probable that a liability has been incurred and the amount of the exposure can be reasonably estimated. To date, such provisions have been immaterial, and we believe that, as of March 31, 2017, we have adequately provided for such contingencies. However, it is possible that our results of operations, cash flows, and financial position could be harmed if one or more non-compliance tax exposures are asserted by any of the jurisdictions where we conduct our operations.

Legal Actions. From time to time, in the ordinary course of business, we are subject to legal proceedings, claims, investigations, and other proceedings, including claims of alleged infringement of third-party patents and other intellectual property rights, and commercial, employment, and other matters. In accordance with generally accepted accounting principles, we make a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. While we believe we have adequately provided for such contingencies as of March 31, 2017, it is possible that our results of operations, cash flows, and financial position could be harmed by the resolution of any such outstanding claims.

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LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have financed our operations and met our capital expenditure requirements primarily from the sale of preferred stock and common stock, although during 2012 and certain earlier years, we were also able to finance our operations through operating cash flows.

The following table presents selected financial information as of March 31, 2017, and for each of the last three fiscal years (dollars in thousands):

	March 31,	December 31,		
	2017	2016	2015	2014
Cash, cash equivalents, and short-term investments*	$21,552	$23,036	$26,070	$43,570
Trade accounts receivable, net	3,035	3,015	4,030	3,948
Working capital	22,527	23,083	26,713	40,310
Stockholders’ equity	24,010	24,678	28,921	43,177

* As of March 31, 2017 and December 31, 2016, includes $1.3 million of restricted investments presented separately on condensed consolidated balance sheet

As of March 31, 2017, we had $21.6 million in cash, cash equivalents, restricted cash and short-term investments, a decrease of $1.5 million as compared to December 31, 2016. Historically, our primary source of cash, other than stock sales, has been receipts from revenue, and to a lesser extent, proceeds from the exercise of stock options by our employees and directors, and the exercise of warrants. Our primary uses of cash have been cost of product revenue, payroll (salaries, commissions, bonuses, and benefits), general operating expenses (costs associated with our offices such as rent, utilities, and maintenance; fees paid to third party service providers such as consultants, accountants, and attorneys; travel and entertainment; equipment and supplies; advertising; and other miscellaneous expenses), acquisitions, capital expenditures, and purchases under our stock repurchase programs.

Cash flows from operating activities. Cash flows from operating activities have historically been driven by net income (loss) levels; adjustments for non-cash charges such as stock-based compensation, depreciation, and amortization; changes in accrued investment income; and fluctuations in operating asset and liability balances. Net cash used in operating activities was $1.5 million for the three months ended March 31, 2017, a decrease in cash outflows of approximately $919,000 as compared to the same period in 2016. During the three months ended March 31, 2017, net cash used in operating activities was primarily the result of our net loss of $1.2 million, and changes in our operating assets and liabilities of $851,000; partially offset by stock-based compensation expenses of $467,000, and depreciation and amortization expense of $110,000. The primary components of the $851,000 net change in our operating assets and liabilities were a $545,000 decrease in accrued liabilities, a $125,000 increase in deferred cost of revenues, and a $124,000 increase in other current assets. Accrued liabilities decreased primarily due to the payment of bonuses that were accrued as of December 31, 2016. Deferred cost of revenues increased due to the mix of products for which revenue was deferred at March 31, 2017. Other current assets increased primarily as a result of an increase in prepaid expenses.

During the three months ended March 31, 2016, net cash used in operating activities was primarily the result of our net loss of $875,000, decreases in operating assets and liabilities of $1.4 million, and a reduction in the expected amount of contingent consideration we expect to owe the former Lumewave shareholders of $318,000; partially offset by depreciation and amortization expense of $144,000. The primary components of the $1.4 million net decrease in our operating assets and liabilities were a $904,000 decrease in accrued liabilities, a $433,000 increase in inventories, a $189,000 increase in accounts receivable, and a $131,000 decrease in deferred revenues; partially offset by a $113,000 increase in accounts payable. Accrued liabilities decreased primarily to the payment of bonuses that were accrued as of December 31, 2015. Inventories increased due to the timing of the purchase and sale of inventory during the quarter. Accounts receivable increased primarily as a result of the timing of shipments to and the corresponding collections from our customers in the first three months of 2016. Deferred revenues decreased in accordance with the overall activity with distributors in all regions. Accounts payable increased due to the timing of receipt and payment

of invoices we received from our vendors during the quarter.
Cash flows from investing activities. Cash flows from investing activities have historically been driven by transactions involving our short-term investment portfolio, capital expenditures, changes in our long-term assets, and acquisitions and divestitures. Net cash provided by investing activities was $16,000 for the three months ended March 31, 2017, an increase in cash inflows of $13,000 from the same period in 2016. During the three months ended March 31, 2017, net cash provided by investing activities was primarily the result of proceeds from maturities and sales of available-for-sale short-term investments of $6.0 million, partially offset by purchases of available-for-sale short-term investments of $6.0 million, and capital expenditures of $16,000.

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During the three months ended March 31, 2016, net cash provided by investing activities was primarily the result of proceeds from maturities and sales of available-for-sale short-term investments of $4.0 million, partially offset by purchases of available-for-sale short-term investments of $4.0 million, and capital expenditures of $5,000.

Cash flows from financing activities. Cash flows from financing activities have historically been driven by the proceeds from issuance of common and preferred stock offset by transactions under our stock repurchase programs and principal payments on our lease financing obligations. Net cash used in financing activities was $17,000 for the three months ended March 31, 2017, a increase in cash outflows of $16,000 as compared to the same period in 2016.

During the three months ended March 31, 2017, net cash used in financing activities was primarily the result of $17,000 worth of shares repurchased from employees for payment of employee taxes on vesting of performance shares.

During the three months ended March 31, 2016, net cash used in financing activities was primarily the result of $1,000 worth of shares repurchased from employees for payment of employee taxes on vesting of performance shares.

As noted above, our cash and investments totaled $21.6 million as of March 31, 2017. Of this amount, approximately 5% was held by our foreign subsidiaries. Our intent is to permanently reinvest a significant portion of our earnings from foreign operations, and current plans do not anticipate that we will need funds generated from foreign operations to fund our domestic operations. In the event funds from foreign operations are needed to fund operations in the United States and if U.S. tax has not already been previously provided, we would provide for and pay any additional U.S. taxes due in connection with repatriating these funds.

We use well-regarded investment managers to manage our invested cash. Our portfolio of investments managed by these investment managers is primarily composed of highly rated U.S. government securities, and to a lesser extent, money market funds. All investments are made according to guidelines and within compliance of policies approved by the Audit Committee of our Board of Directors.

We maintain an operating credit line of $1.0 million with our primary bank for company credit card purchases. This line of credit continues to be secured by a collateral of the first priority on $1.3 million of our investments (presented as restricted investments in the condensed consolidated balance sheets).

In the future, our cash reserves may be used to strategically acquire or invest in other companies, products, or technologies that are complementary to our business. In addition, our combined cash, cash equivalents, and short-term investments balances could be negatively affected by various risks and uncertainties, including, but not limited to, the risks detailed in this Quarterly Report in the section titled “Factors That May Affect Future Results of Operations.” For example, any continued weakening of economic conditions or changes in our planned cash outlay could negatively affect our existing cash reserves.

Based on our current business plan and revenue prospects, we believe that our existing cash reserves will be sufficient to meet our projected working capital and other cash requirements for at least the next twelve months. However, we currently expect that our combined cash, cash equivalent, and short-term investment balance will decline during the remainder of 2017. In the event that we require additional financing, such financing may not be available to us in the amounts or at the times that we require, or on acceptable terms. If we fail to obtain additional financing, when and if necessary, our business would be harmed.

RELATED PARTY TRANSACTIONS

In June 2000, we entered into a stock purchase agreement with Enel pursuant to which Enel purchased 300,000 newly issued shares of our common stock for $130.7 million. The closing of this stock purchase occurred on September 11, 2000. At the closing, Enel had agreed that it would not, except under limited circumstances, sell or otherwise transfer any of those shares for a specified time period. That time period expired September 11, 2003. To our knowledge, Enel has not disposed of any of its 300,000 shares. Under the terms of the stock purchase agreement, Enel has the right to nominate a member of our board of directors. A representative of Enel served on our board until March 14, 2012; no Enel representative is presently serving on our board.

At the time we entered into the stock purchase agreement with Enel, we also entered into a research and development agreement with an affiliate of Enel (the “R&D Agreement”). Under the terms of the R&D Agreement, we cooperated with Enel to integrate our LONWORKS technology into Enel’s remote metering management project in Italy, the Contatore Elettronico. We completed the sale of our components and products for the deployment phase of the

Contatore Elettronico project during 2005. During 2006, we supplied Enel and its designated manufacturers with limited spare parts for the Contatore Elettronico system. In October 2006, we entered into a new development and supply agreement and a software enhancement agreement with Enel.

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Under the development and supply agreement, Enel and its contract manufacturers purchase additional electronic components and finished goods from us. Under the software enhancement agreement, we provided software enhancements to Enel for use in its Contatore Elettronico system. The software enhancement was assigned to S&T as part of the sale of our Grid division in September 2014. The development and supply agreement expired in March 2016.

For the three months ended March 31, 2017 and 2016, the Company recognized revenue from products and services sold to Enel and its designated manufacturers of approximately $0 and $1.3 million, respectively. As of March 31, 2017 and December 31, 2016, none of the Company's total accounts receivable balance related to amounts owed by Enel and its designated manufacturers.

RECENTLY ISSUED ACCOUNTING STANDARDS

During the three months ended March 31, 2017, there have been no new recent accounting pronouncements or changes in accounting pronouncements, other than those noted in Note 1 in the Notes to Condensed Consolidated Financial Statements in Part I, Item 1 of this report, that are of significance, or potential significance, to our company.

FACTORS THAT MAY AFFECT FUTURE RESULTS OF OPERATIONS

Interested persons should carefully consider the risks described below in evaluating our company. Additional risks and uncertainties not presently known to us, or that we currently consider immaterial, may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations could be materially adversely affected. In that case, the trading price of our common stock would likely decline. Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described in this section. This section should be read in conjunction with the condensed consolidated financial statements and accompanying notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Quarterly Report on Form 10-Q.

There can be no guarantee that the IIoT market in general, and the lighting market segment in particular, will develop as expected, or that we will be successful in pursuing these market opportunities.

We have devoted and will continue to devote significant effort and resources to leverage our technology and develop and launch our platform to customers within the IIoT market. However, to date, the market for our products has not developed as quickly as anticipated, and our efforts to capitalize on these opportunities have not produced the results we anticipated. Our efforts to capitalize on these opportunities may not be successful in the near term, or at all. Furthermore, for the last several years, revenues from our legacy embedded systems products have been declining, and we anticipate that this trend will continue for the foreseeable future.

We have decided to focus predominantly on lighting controls within the IIoT as our targeted market. As we have a limited operating history in this market segment, we are subject to a number of risks and uncertainties that may impact our ability to gain market acceptance for our lighting control products.

In recent years, we have invested substantial resources in the development and commercialization of control networking solutions for the lighting market. However, we have a limited operating history in this market segment, and we may not recognize a meaningful amount of revenues from these efforts in the near future, or at all. Our efforts to gain market acceptance for our lighting control products and solutions are subject to considerable risk and uncertainty, including:

- the risk of competition and emerging technologies (see "If we do not develop and maintain adequate distribution channels, our revenues will be harmed" for additional information on the risks associated with competing for market share);
- the risk that we will not be able to develop adequate sales channels for these new products and services (see "Our IIoT revenues may not meet expectations, which could cause volatility in the price of our stock" for additional information on the risks associated with establishing new sales channels);
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the risk that we misjudge the market and fail to develop solutions that meet the requirements of our existing or potential customers;

- the risk that our solutions will suffer security breaches or unintended releases of private data;
- the risk that our products will not perform adequately due to defect or misuse by customers (see "Liabilities resulting from defects in or misuse of our products, whether or not covered by insurance, may delay our revenues and increase our liabilities and expenses" for additional information on the risks associated with defective or misused products);
- the risk that our supply chain for components is unable to meet our demand (see "Because we depend on a limited number of key suppliers and in certain cases, a sole supplier, the failure of any key supplier to produce timely and compliant

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products could result in a failure to ship products, or could subject us to higher prices, which would harm our results of operations and financial position” for additional information on the risks associated with manufacturing).

We have changed our business model significantly in recent years, which makes it difficult to evaluate our prospects and forecast our future operating results.

Although we commenced our business in 1988, we have made significant changes to our business model in recent years. Historically, we derived all of our revenues from our embedded systems and Grid businesses. However, in 2014, we sold our Grid business, and over the last several years, we have experienced a decline in revenues from our legacy embedded systems products and services, including a cessation in our shipments to Enel.

In recent years, we have shifted our focus to networking solutions for the outdoor lighting market. Unlike our legacy embedded systems products, which are typically sold to OEMs for incorporation into their products, which are then sold to their commercial and industrial customers, our lighting solutions products are more project based, being sold through energy services companies and distributors to municipalities, enterprise and educational campuses, retailers, and other end users. In addition, our outdoor lighting solutions typically generate lower overall gross margins than do our embedded systems products.

As we have a limited operating history with our lighting solutions, our ability to forecast our future operating results and effectively assess our future prospects is subject to a number of uncertainties that may impact our ability to plan for and model future growth. Our historical revenue growth should not be considered indicative of our future performance. Further, in future periods, our revenues could decline for a number of reasons, including the failure to offset the expected decline in revenues from our embedded systems products by an increase in sales of our lighting solutions, changes in our pricing structure, increased competition in the IIoT market generally or in the lighting market in particular, or our failure, for any reason, to capitalize on growth opportunities. We have encountered and will continue to encounter risks and uncertainties frequently experienced by companies in rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan our business, are incorrect or change, or if we do not address these risks successfully, our operating and financial results could differ materially from our expectations, and our business could suffer.

Our revenues may not meet expectations, and our operating expenses may be higher than we anticipate, which could cause volatility in the price of our stock.

As we attempt to grow our IIoT business, we will commit significant resources developing new products in emerging markets. In addition, our IIoT business operates in nascent markets, such as outdoor lighting and controls, in which we have yet to build a reliable customer base. As a result, sales of our products are unpredictable and yet to be proven, and sales and marketing costs related to our products may be significant. These factors could have a negative impact on our revenues and make it difficult to project our financial results, which could cause declines and volatility in our stock price. Additionally, because we are operating in an emerging market, risks that we are not currently able to identify are likely to materialize and could negatively impact our operations and financial condition.

Emerging markets are particularly dynamic and highly competitive, and we may lose sales to our competitors, which would harm our revenues and results of operations.

Competition in the IIoT market is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions, industry consolidations, effective management of distribution channels, rapid changes in customer or regulatory requirements, and localized market requirements. In each of our existing and target markets, we compete with a wide array of manufacturers, vendors, strategic alliances, systems developers and other businesses. The future of our IIoT business depends significantly on our ability to react to changing customer needs by enhancing our existing products and developing new products. There can be no guarantee, however, that new products and product enhancements will be accepted by businesses and consumers. If we make investments in technologies that do not gain market acceptance, our business may not grow as anticipated. In addition, future product offerings by our competitors can render our products obsolete. Any failure to evolve with emerging technologies and our competitors could cause a loss of market share and result in declining revenues.

The principal competitive factors that affect the markets for our products include the following:

- our ability to anticipate changes in customer or regulatory requirements and to develop, or improve, our products to meet these requirements in a timely manner;
- the price and features of our products such as adaptability, scalability, functionality, ease of use, and the ability to integrate with other products;
- our product reputation, quality, performance, and conformance with established industry standards;

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- our ability to expand our product line to address our customers' requirements;
- our ability to effectively manage and expand our distribution channels to address new markets for current and future products;
- our ability to meet a customer's required delivery schedules;
- a customer's willingness to do business with us because of our size and perceived concerns regarding our liquidity and financial strength relative to our competitors;
- the risk of industry consolidation, which is particularly high in emerging markets such as the IIoT;
- our customer service and support;
- warranties, indemnities, and other contractual terms; and
- customer relationships and market awareness.

Competitors for our IIoT products include some of the largest companies in the electronics industry, operating either alone or together with trade associations and partners. Key company competitors include companies such as Cimcon Lighting, Inc., Cree Inc., Digi International, General Electric, LED Roadway Lighting, Maxim Integrated Products, Philips, Siemens, Silver Spring Networks, STMicroelectronics, Telensa, Texas Instruments, and Tridium. Key industry standard and trade group competitors include BACnet, DALI, DeviceNet, HART, Konnex, Profibus, ZigBee, and the ZWave Alliance in the IIoT market. Each of these standards and/or alliances is backed by one or more competitors. For example, the ZigBee alliance includes over 300 member companies with promoter members, such as Ember, Emerson, Freescale, Kroger, Landis+Gyr (a subsidiary of Toshiba), Philips, Reliant Energy, Schneider Electric, STMicroelectronics, Tendril, and Texas Instruments. Additionally, because we are operating in an emerging market, it is likely that additional competitors could surface and rapidly gain market share.

Many of our competitors, alone or together with their trade associations and partners, have significantly greater financial, technical, marketing, service and other resources, significantly greater name recognition, and broader product offerings, all of which may impact the willingness of customers and potential customers to do business with us. If we are unable to compete effectively in any of the markets we serve, our revenues, results of operations, and financial position would be harmed.

The sales cycle for our products is often lengthy and unpredictable.

The sales cycle between initial customer contact and execution of a contract or license agreement with a customer or purchaser of our products can vary widely. Initially, we must educate our customers about the potential applications of and cost savings associated with our products.

If we are successful in this effort for our embedded systems products, OEMs will typically conduct extensive and lengthy product evaluations before making a decision to design our products into their offerings. Once the OEM decides to incorporate our products, volume purchases of our products are generally delayed until the OEM's product development, system integration, and product introduction periods have been completed. In addition, changes in our customers' budgets, or the priority they assign to control network development, could also affect the sales cycle.

For our outdoor lighting controls products, the sales cycle can also be extended. As a nascent market, many of our sales channel partners, as well as end use customers, are not aware of the benefits our controls technology can bring to their lighting systems. This requires extensive educational efforts on our part, which, if successful, can lead to one or more projects that deploy our lighting control solution. For larger projects, this typically commences with a trial deployment of relatively low value to us. If the trial is successful, the end use customer may commence a full scale deployment that could take months or years to complete.

In addition, potential customers for our products, both embedded systems and outdoor lighting controls, include local, state and federal government authorities. For several reasons, sales to government authorities can be extended and unpredictable. Government authorities generally have complex budgeting, purchasing, and regulatory processes that govern their capital spending, and their spending is likely to be adversely impacted by economic conditions. In addition, in many instances, sales to government authorities may require field trials and may be delayed by the time it takes for government officials to evaluate multiple competing bids, negotiate terms, and award contracts. We further face the risk of cancellation during development and production due to regulatory, government and geopolitical changes, and delays in installing, operating, and evaluating the results of any field trials before full implementation of our products.

For these reasons, the sales cycle associated with our IIoT products is subject to a number of significant risks that are beyond our control. Consequently, if our forecasted customer orders are not realized, our revenues could be materially adversely affected. In addition, the extended sales cycle may result in our inability to recognize revenue from existing or new projects until the end of several fiscal quarters. This may also make it difficult to predict our financial results and increase the volatility of our stock price.

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If we are not able to develop or enhance our products in a timely manner, our revenues will suffer.
Due to the nature of development efforts in general, we can experience delays in the introduction of new or improved products beyond our original projected shipping date for such products. Historically, when these delays have occurred, we experienced an increase in our development costs and a delay in our ability to generate revenues from these new products. In addition, such delays could cause us to incur penalties if our deliveries are delayed, could otherwise impair our relationship with any of our customers that were relying on the timely delivery of our products in order to complete their own products or projects, or could cause the customer to cancel orders or to seek alternate sources of supply or other remedies. Any delay in the introduction of new products could impact future revenue targets or forecasts.
We are sometimes required to modify our products to meet local rules and regulations. We may not be able to increase the price of such products to reflect the costs of such modifications, given competitive markets. In addition, given the long-term nature of development activities, we may be required to undertake such modifications prior to receiving firm commitments or orders from our customers. In either of these or other similar scenarios, we may not be able to recover our costs attributable to required product modifications.
We intend to continue investing resources in our development activities, which will expose us to risks, such as protection of intellectual property, investment risk, and labor costs and other matters. We could also be adversely affected by delays or cost increases experienced by third parties that are developing products on our behalf.
If we do not develop and maintain adequate distribution channels, our revenues will be harmed.
The market for our products is new and unproven, and we cannot rely solely on our existing distributors to sell our products. Therefore, we are focused on expanding our distribution channel to include new distributors in order to generate revenue from product sales. We expect that the distribution channel for our products will be dispersed and it is difficult to predict how long it will take and how costly it will be to develop. We may not be successful in developing and maintaining adequate distribution channels within our expected timeframe and cost expectations, if at all. In addition, if any of our new or existing distributor partners fail to dedicate sufficient resources to market and sell our products, our revenues would suffer. Furthermore, if our existing distributor partners were to significantly reduce their inventory levels for our products, we could expect a decrease in service levels to our end-use customers.
Sales of our products may fail to meet our financial targets, which would negatively impact our results of operations and expected return on investment in the IIoT market.
We have invested and intend to continue to invest significant resources in the development and sales of products in the emerging IIoT market, particularly in the outdoor lighting market segment. If we are unable to receive orders for, ship, and recognize revenue for our products in a timely manner, and in the quantities and at prices in line with our targets, our financial results will be harmed. Our long-term financial goals include expectations for a return on these investments, but we may or may not ever realize any return whatsoever on this investment of resources.
Our market share in our existing embedded systems business has declined due to increased competition, reduced levels of investment in our LONWORKS product line, and pricing pressures faced around the world. Moreover, recent revenues generated from our embedded systems business have failed to meet our expectations. We expect this trend to continue for the foreseeable future, which could cause our operating results to suffer to the extent we are not able to generate offsetting revenues and gross profit through the sale of our control networking solutions for the outdoor lighting market. If this market share loss were to accelerate, our ability to continue funding our entry into the outdoor lighting segment could be harmed.

In order to achieve our financial targets, we believe that we must meet the following objectives:

- Achieve acceptance of our products in the IIoT market, particularly the outdoor lighting market, in order to increase our revenues;
- Manage our operating expenses to a reasonable percentage of revenues; and
- Manage our cash resources prudently.

Even if we meet these objectives, there can be no assurance that we will meet our overall financial targets and objectives.

A significant portion of our operating expenses are fixed. Therefore, if we cannot achieve our revenue targets, our use of cash balances would increase, our losses would increase, and/or we would be required to take additional actions necessary to reduce

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expenses. We cannot assure you that we will meet any or all of these objectives to the extent necessary to achieve our financial goals and, if we fail to achieve our goals, our results of operations are likely to be harmed.

In our legacy embedded systems business, we may be unable to promote and expand acceptance of our open, interoperable control systems over competing protocols, standards, or technologies.

LONWORKS and IzoT technology are open, meaning that many of our technology patents are broadly licensed without royalties or license fees. As a result, our IIoT customers are able to develop hardware and software solutions that compete with some of our products. Because some of our customers are OEMs that develop and market their own control systems, these customers, in particular, could develop competing products based on our open technology. For instance, we have published all of the network management commands required to develop software that competes with our LNS software.

In addition, many of our IIoT competitors are dedicated to promoting closed or proprietary systems, technologies, software and network protocols or product standards that differ from or are incompatible with ours. We also face strong competition from large trade associations that promote alternative technologies and standards for particular vertical applications or for use in specific countries. These include BACnet, DALI, and KNX in the buildings market; DeviceNet, HART, and ProfiBus in the industrial controls market; TCN in the rail transportation market; and Echonet, ZigBee, and Z-Wave in the home control markets.

The ability of our IIoT products to interoperate with multiple standards is important to our success. Our technologies, protocols, or standards may not be successful or we may decide not to invest our resources at the levels required in order to compete with new or enhanced products or standards introduced by our IIoT product line competitors, which would have a material adverse effect on our revenues, results of operations, and financial condition.

We are increasingly dependent on third-party developers.

We are increasingly reliant on various third parties for the development of software used in our products. There is a risk that the software provided by these third parties could contain errors or defects that could adversely impact the quality of our products. In addition, these third parties may use open source or other code that contains security flaws, which may cause our products to be more prone to hacking or other security attacks. We may also be negatively impacted by employee turnover or other challenges that these third-party developers face in their own businesses. The materialization of any of these risks would impact our ability to deliver quality products on a timely basis, which could adversely impact our reputation and brand and harm our business and operating results.

In addition, many of these third-party developers are located in markets that are subject to political risk, intellectual property misappropriation, corruption, infrastructure problems and natural disasters in addition to country specific privacy and data security risks, given current legal and regulatory environments. The failure of these third parties to meet their obligations and adequately deploy business continuity plans in the event of a crisis and/or the development of significant disagreements, natural or man-made disasters or other factors that materially disrupt our ongoing relationship with these developers could negatively affect our operations.

Because we depend on a limited number of key suppliers and, in certain cases, a sole supplier, the failure of any key supplier to produce timely and compliant products could result in a failure to ship products, or could subject us to higher prices, which would harm our results of operations and financial position.

Our future success will depend significantly on our ability to timely manufacture our products cost effectively, in sufficient volumes, and in accordance with quality standards. For most of our products requiring assembly, we rely on a limited number of contract electronic manufacturers (CEMs), principally Bel-Fuse. These CEMs procure material and assemble, test, and inspect the final products to our specifications. This strategy involves certain risks, including reduced control over quality, costs, delivery schedules, availability of materials, components, finished products, and manufacturing yields. For example, an extended delay in the supply of a key component could disrupt the manufacturing of our products. Any such interruption in the supply of key components could therefore have a material adverse effect on our customer relationships and revenues. As a result of these and other risks, our CEMs could demand price increases for manufacturing our products. The Bel-Fuse factories, where our products are manufactured, are located in China. The Chinese government maintains programs, whereby labor rates for the manufacture of our products will increase over time. In addition, our agreements with our CEMs make us responsible for components and subassemblies purchased by the CEMs when based on our forecasts or purchase orders. Accordingly, we will be at risk for any excess and obsolete inventory purchased by our CEMs. Lastly, CEMs can experience turnover, instability, and lapses in manufacturing or component quality, exposing us to additional risks as well as