NUMEREX CORP /PA/

FORM 10-K
(Annual Report)

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☒ **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2016

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission File Number 000-22920

NUMEREX CORP.

(Name of Registrant as Specified in Its Charter)

Pennsylvania **(State or Other Jurisdiction** **of Incorporation or Organization)**	**11-2948749** **(I.R.S. Employer** **Identification Number)**
400 Interstate North Parkway, Suite 1350 Atlanta, GA **(Address of Principal Executive Offices)**	**30339-2119** **(Zip Code)**

(770) 693-5950
(Registrant's Telephone Number, Including Area Code)

Securities Registered Pursuant to Section 12(b) of the Act:

Class A Common Stock, no par value **(Title of each class)**	**The NASDAQ Stock Market LLC** **(Name of each exchange on which registered)**

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15 (d) of the Act. Yes ☐ No ☑

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

Large accelerated filer ☐ Accelerated filer ☑ Non-accelerated filer ☐ Smaller Reporting Company ☐

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

The aggregate market value of the registrant's outstanding common stock held by non-affiliates of the registrant was $146.1 million based on a closing price of $7.49 on June 30, 2016, as quoted on the NASDAQ Global market.

The number of shares outstanding of the registrant's Class A Common Stock as of March 30, 2017, was 19.6 million shares.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 31, 2016. The proxy statement is incorporated herein by reference into the following parts of the Form 10-K:

Part III, Item 10, Directors, Executive Officers and Corporate Governance;
Part III, Item 11, Executive Compensation;
Part III, Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters;
Part III, Item 13, Certain Relationships and Related Transactions, and Director Independence; and
Part III, Item 14, Principal Accountant Fees and Services.

NUMEREX CORP.
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016

TABLE OF CONTENTS

Forward-Looking Statements

This document contains, and other statements may contain, forward-looking statements with respect to Numerex future financial or business performance, conditions or strategies and other financial and business matters, including expectations regarding growth trends and activities. Forward-looking statements are typically identified by words or phrases such as "believe," "expect," "anticipate," "intend," "estimate," "assume," "strategy," "plan," "outlook," "outcome," "continue," "remain," "trend," and variations of such words and similar expressions, or future or conditional verbs such as "will," "would," "should," "could," "may," or similar expressions. Numerex cautions that these forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. These forward-looking statements speak only as of the date of this filing, and Numerex assumes no duty to update forward-looking statements. Actual results could differ materially from those anticipated in these forward-looking statements and future results could differ materially from historical performance.

The following factors, among others, could cause actual results to differ materially from forward-looking statements or historical performance: our inability to reposition our platform to capture greater recurring subscription revenues; that a substantial portion of revenues derived from contracts may be terminated at any time; the risks that our strategic suppliers materially change or disrupt the flow of products or services; variations in quarterly operating results; delays in the development, introduction, integration and marketing of new products and services; customer acceptance of services; economic conditions resulting in decreased demand for our products and services; the risk that our strategic alliances, partnerships and/or wireless network operators will not yield substantial revenues; changes in financial and capital markets, and the inability to raise growth capital; the inability to attain revenue and earnings growth; changes in interest rates; inability to repay our indebtedness; inflation; the introduction, withdrawal, success and timing of business initiatives and strategies; competitive conditions; the inability to realize revenue enhancements; disruption in key supplier relationships and/or related services; and extent and timing of technological changes.

PART I.

Item 1. BUSINESS

Overview

Numerex Corp. (“Numerex,” the “Company” or “we”) is headquartered in Atlanta, Georgia, and is a corporation organized under the laws of the Commonwealth of Pennsylvania. We are a single source, leading provider of managed enterprise solutions enabling the Internet of Things (IoT). We empower enterprise operations with world-class, managed IoT solutions that are simple, innovative, scalable and secure.

Our core strategy is to generate long term and sustainable recurring revenue through a portfolio of managed, end-to-end IoT solutions which are generally sold on a subscription basis and built on our horizontal, integrated platform. Our solutions incorporate the key IoT building blocks – Device, Network, Application and Platform. Our solutions also simplify the implementation and improve the speed to market for enterprise users in select, targeted verticals in the asset monitoring and optimization, asset tracking, and safety and security markets.

Our technology encompasses a broad spectrum of the IoT ecosystem and delivers managed solutions for enterprise users which derive added value through device, network, application and platform enablement. Our industry leading solutions combine over 20 years of expertise and experience through a modular, end-to-end platform infrastructure, and are already market proven with pre-packaged, hosted IoT vertical solutions that are being rapidly deployed by thousands of enterprises. At the end of 2016, we supported more than 1.7 million IoT subscriptions.

An IoT solution is generally viewed as a combination of devices, software and services that operate with little or no human interaction. More specifically, it consists of using a device or sensor (e.g., tracker or communicator, etc.) to capture “event” data (e.g., fill level, inventory status, location, temperature, etc.) relaying the data through a network (e.g., cellular or satellite) to an application (often with cloud or Internet based software), by way of a horizontal platform, which then translates the captured data into actionable information (e.g. alarm notification send help, the whereabouts of a person of interest, the location of an asset being tracked, the fill level in a tank is too low, etc.).

Our subscription-based vertical solutions and platform services, which are intended to generate streams of long-term, high-margin recurring revenues, are the cornerstone of our business model. We create value by helping our customers implement IoT solutions through a single source – rapidly, efficiently, reliably and securely. We put a strong emphasis on data security, including the use of authentication, encryption and virtual private network technologies referred to as “VPN” to protect customer data.

We operate in the Business-to-Business market, and our customers, in general, serve the final end users. Our products and services are primarily sold to enterprise and government organizations, some with global deployments. We have decided to concentrate our resources to focus on a number of vertical markets that we believe we can grow profitably, compete well, and command market leadership. Our targeted vertical markets include home security, public safety, oil and gas, manufacturing and supply chain management. We offer a complete solution through a single source, rather than requiring customers to utilize multiple vendors. We also provide several enabling value-added services and accelerate the go-to-market process for our customers by simplifying the complexity of a successful IoT implementation through our cloud-based, horizontal IoT platform.

In addition to selling pre-configured, off-the-shelf managed solutions to targeted vertical markets, we also sell our solutions as white labeled IoT solutions to our channel partners who have well-defined markets and a sales organization that can ramp up quickly with scale to deploy these solutions to their customers. Examples of such white labeled solutions include asset tracking, tank monitoring, mPERS (mobile personal emergency response systems), and fleet tracking.

Our offerings use cellular, satellite, broadband and wireline networks worldwide to transmit data. We understand and manage all the requirements associated with international connectivity including regulations, processes and data requirements.

We utilize a diverse range of third party manufacturing sources and telecommunications standards. Our ability to use a scalable, horizontal platform as a service to enable a robust management portal that can manage carrier relationships, consolidate disparate networks, and keep track of thousands, if not millions of devices – all while providing customers with a complete view of their activity – is a unique strength of Numerex and a clear differentiator from our competitors.

SERVICE DELIVERY PLATFORM AND ENABLING SERVICES

❖ **The Numerex IoT Platform**

In a rapidly changing business environment requiring visibility and real-time access to information, rapid solutions deployment with the ability to manage networks, devices and applications from a single source platform can have a significant impact on business processes and contribute to improved operational efficiencies. Our broad IoT horizontal service delivery platform was designed with that goal in mind.

The Numerex platform combines IoT service enablement features with configurable application frameworks to deploy solutions quickly and to reduce or eliminate development costs. Operating in a cloud-based environment, the platform focuses on the core enablement of IoT solutions and provides the ability to deliver value-added services with speed and ease. Our platform provides a wide range of capabilities such as application enablement frameworks; self-care portal for device and subscriber; gateway as a service; data management and warehousing; billing service; policy and performance management; connectivity management; and network management.

Our platform provides scalability and flexibility with service delivery options that can be accessed independently or as a fully integrated solution without costly development and coding. Whether customers desire to exploit a new revenue opportunity or to gain visibility into existing operations to reduce costs, our platform can be utilized in many ways. Typical offerings include white labeled applications; application extension to a mobile IoT environment; sensor and tracking data management from wireless devices into the customer's back office enterprise applications; and distributed service offerings to dealers and representatives.

- **Enabling Services**

We offer an extensive range of products and services that work with our hosted platform and that make integration between smart device, network, application, and customer systems a seamless process. From asset tracking on a global scale to stationary or “static” solutions that involve monitoring, measuring, and metering applications, our team of IoT on-boarding specialists and engineers work together to optimize commercialization of a solution. Examples of enabling services include: network connection setup, device installation support and services, 24x7x365 customer support; flexible billing; integration services; automated provisioning; a device management portal; a monitoring and network operations center; network redundancy; product certification; and ancillary services such as, but not limited to, warehousing and fulfillment.

SALES, MARKETING AND DISTRIBUTION

We sell our solutions and related services to, with, and through our strategic partner channels including integrators, consultative groups, wireless network operators, key supply chain partners and large end-user enterprises. We also sell direct to enterprise users in most of the markets we operate in.

We primarily employ an indirect sales model for our unbranded (white label) products through Value Added Resellers (VARs), vertically focused System Integrators (SIs) and Original Equipment Manufacturers (OEMs) who integrate our products and services into their own solutions. We also indirectly market and sell certain Numerex branded products and services through distribution and dealer channels, specifically the Uplink Security Solutions. Uplink alarm security products are sold “off the shelf” into distribution channels and to dealers throughout North America.

SUPPLIERS

We rely on third-party contract manufacturers, component suppliers, and wireless network operators and carriers to manufacture and supply most of the equipment used to provide our wireless IoT solutions, networking equipment and products. We also rely on multiple third-party wireless network operators to provide the underlying network service infrastructure that we use to support our IoT data network. These third party suppliers and wireless network operators are located primarily in the United States but also include other North American and international vendors.

Several GSM-based wireless carriers have announced their intention to discontinue their second generation (2G) networks between 2016 and 2020. CDMA-based carriers have announced their intention to discontinue 2G networks as early as 2018. We have entered into a reseller agreement with one of our network service providers that will allow us to continue supporting 2G devices to the end of this decade while at the same time, introducing LTE (Long-Term Evolution) products for more advanced services. During 2016, we converted 93% of our 2G subscribers from AT&T to T-Mobile.

COMPETITION

The market for our technology and platforms remains characterized by rapid technological change. The principal competitive factors in this market continue to be product performance, ease of use, reliability, price, breadth of product lines, sales and distribution capability, technical support and service, customer relations, and general industry and economic conditions.

Several businesses that share our IoT space can be viewed to some extent as competitors, including IoT focused Original Equipment Manufacturers (OEMs), vertically focused IoT Application Service Providers (ASP), Mobile Virtual Network Operators (MVNOs) and resellers, certain type of IoT Platform providers, system integrators, and wireless operators and carriers that offer a variety of the components and services required for the delivery of complete IoT solutions. Some module manufacturers have also started to market application development platforms while other IoT players offer airtime services, making integration capabilities available to their customers. However, we believe that we have a competitive advantage and are uniquely positioned since contrary to most of these business entities, we provide all of the key components of the IoT value chain, including Device, Network, Application (under the trademark of “Numerex DNA”), cloud-based enabling platforms, multiple wireless technologies, custom applications, and wireless network services through one single source. We believe that our current IoT services, combined with the continuing development of our network offerings, infrastructure and technology, positions us to compete effectively with emerging providers of IoT and IoT solutions using GSM, CDMA, LTE, and satellite technologies. Other potentially competitive offerings may include Wi-Fi, Low Power Wide Area Network (LPWAN), and other technologies and networks. We continue to closely monitor the industry trend and evaluate our network options.

We believe that our longevity in the industry; our repository of intellectual property, know-how, prior art, and numerous patents and licenses in conjunction with our ability to offer fully-integrated solutions; global reach; data protection; rapid response, scalability and flexibility are critical differentiators.

Our Uplink security products and services have five primary competitors in the existing channels of distribution — Alarm.com; Honeywell's AlarmNet; NAPCO Security Technologies; Telular's Teleguard and DSC, the security division of Tyco. We believe that the principal competitive factors when making a product selection in the business and consumer security industry are hardware price, service price, reliability, industry certification status and feature requirements for specific security applications, for example fire, burglary, bank vault, etc.

ENGINEERING AND DEVELOPMENT

Our success depends, in part, on our ability to enhance our existing products and introduce new products and applications on a timely basis. We plan to continue to devote a meaningful portion of our resources to engineering and development. We incurred $9.2 million of engineering and development costs during the year ended December 31, 2016, and capitalized $2.4 million of engineering and development costs as internally developed software.

We continue to invest in new services and improvements to our various technologies, especially networks and digital fixed and mobile solutions. We primarily focus on the development of IoT solutions and enabling platforms, enhancement of our gateway and network services, reductions in the cost of delivery of our solutions, and enhancements and expansion of our application capabilities including application frameworks.

PRODUCT WARRANTY AND SERVICES

Our IoT business typically provides a limited, one-year repair or replacement warranty on purchased hardware-based products. We provide limited no cost repair or replacement services on managed service hardware-based products over the term of the managed service agreement ranging from three to five years. To date, warranty costs and the cost of maintaining our warranty programs have not been material to our business.

INTELLECTUAL PROPERTY

We and our subsidiaries hold rights to patents to certain aspects of our hardware devices, software, and network and platform services. We have also registered or applied for trademarks in the United States, Europe, Canada, Mexico and a number of other foreign countries. Our portfolio of registered United States, European, Canadian, and Mexican trademarks includes such "core" marks as NUMEREX®, UPLINK®, FOCALPOINT® OMNILINK®, IMANAGE ™ , ITANK ™ AND MYSHIELD. Although we believe the ownership of patents and trademarks is an important factor in our business and that our success depends in part on such ownership, we rely more on the talent, competence, and professional abilities of our personnel than on the accumulation of intellectual property rights.

We regularly file patent applications to protect innovations arising from our internal engineering and development activities. In recent years, our patent filings have increased reflecting our increased investment in new product development. In deciding whether to file a patent application, we consider the commercial benefit patent protection will provide over our obligation to disclose our innovation to the public and the cost of pursuing patent protection. We make decisions concerning our pursuit of patent protection in foreign countries using the same philosophy.

Most of our patents, patent applications, and patents pending fall into one or more of the following categories:

- Wireless/cellular signal transport
- Alarm and security system signaling
- Location-based signaling
- Remote asset and personal monitoring and tracking
- Vending
- Voice and video signal transport
- Offender tracking and monitoring

- Mobile personal emergency response systems (mPERS)

No single patent is solely responsible for protecting our products. United States patents have a limited legal lifespan, typically 20 years from the filing date for a utility patent filed on or after June 8, 1995. We believe the duration of our patents is adequate relative to the expected lifespan of our products. No single patent covers products or services that comprise a material portion of our 2016 revenues. No assurance can be given regarding the scope of patent protection.

Many of our products utilize intellectual property rights of third parties. It may be necessary in the future to seek or renew licenses relating to various aspects of our products and business methods. While we have generally been able to obtain such licenses on commercially reasonable terms in the past, there is no guarantee that such licenses could be obtained in the future on reasonable terms or at all. Because of technological changes in the industries in which we compete, current extensive patent coverage, and the rapid rate of issuance of new patents, it is possible that certain components of our products and business methods may unknowingly infringe upon existing patents or intellectual property rights of others. We periodically receive offers from third parties to obtain licenses for patents and other intellectual rights in exchange for royalties or other payments. From time to time, we have been notified that we may be infringing certain patents or other intellectual property rights of third parties.

We also hold other intellectual property rights including, without limitation, copyrights, trademarks, and trade secret protections relating to our technology, products, and processes. We believe that rapid technological developments in the telecommunications and location based services industries may limit the protection afforded by patents.

In an effort to maintain the confidentiality and ownership of our trade secrets and proprietary information, we require all of our employees and consultants to sign confidentiality, non-compete, and non-solicit agreements. Employees and consultants involved in technical endeavors also sign invention assignment agreements.

REGULATION

Federal, state, and local telecommunications laws and regulations have not posed any significant impediments to either the delivery of wireless data signals/messaging or services using our various platforms. However, we may be subject to certain governmentally imposed taxes, surcharges, fees, and other regulatory charges, as well as new laws and regulations governing fixed and mobile communications devices, associated services, our business and markets. As we expand our international sales, we may be subject to telecommunications regulations in those foreign jurisdictions.

EMPLOYEES

As of March 31, 2017, we had 157 employees in the U.S., consisting of 79 in sales, marketing and customer service,73 in engineering and operations and 5 in management and administration. We have experienced no work stoppages and none of our employees are represented by collective bargaining arrangements. We believe our relationship with our employees is good.

AVAILABLE INFORMATION

Our executive offices are located at 400 Interstate North Parkway, Suite 1350, Atlanta, Georgia 30339. We make available free of charge through our website at *www.numerex.com* our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and all amendments thereto filed or furnished pursuant to 13(a) or 15(d) of the Securities and Exchange Act of 1934, as soon as reasonably practicable after such reports are filed with or furnished to the Securities and Exchange Commission. Additionally, our board committee charters and code of ethics are available on our website. We intend to post to this website all amendments to the charters and code of ethics. Our filings are also available through the Securities and Exchange Commission via their website, http://www.sec.gov . You may also read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The information contained on our website is not incorporated by reference in this annual report on form 10-K and should not be considered a part of this report.

EXECUTIVE OFFICERS OF THE REGISTRANT

Our executive officers, and all persons chosen to become executive officers, and their ages and positions as of March 31, 2017, are as follows:

Name	Age	Position
Kenneth L. Gayron	47	Interim Chief Executive Officer and Chief Financial Officer
Kelly Gay	57	Chief Operating Officer
Shu Gan	55	Chief Marketing Officer

Mr. Gayron began serving as Chief Financial Officer on March 7, 2016, and was appointed to the role of Interim Executive Officer, effective January 11, 2017. Prior to joining Numerex, Mr. Gayron was Chief Financial Officer of Osmotica Pharmaceuticals, an international medical technology company. At Osmotica, Mr. Gayron was instrumental in driving growth and improving profitability over 300%, resulting in a successful exit to Vertical Pharmaceuticals, a portfolio company for Avista Capital. Mr. Gayron's experience also includes roles as VP Finance and Treasurer of Sensus, where he was a leader in building a scalable business platform for an over $1 billion communications company, and Treasurer of Nuance Communications, a $2 billion technology company. Prior to his corporate roles, Mr. Gayron was an investment banker for 10 years at UBS and CIBC World Markets. During his time on Wall Street, Mr. Gayron completed over 60 transactions, in which he provided capital raising and advisory services to technology and private equity clients.

Ms. Gay was appointed Chief Operating Officer in January of 2017. From May 2014 until May 2016, Ms. Gay served as the Company's President, Network Solutions. Prior to that time, Ms. Gay was Chief Executive Officer and President of Omnilink Systems Inc. (electronic tracking and monitoring devices) since April 2010. The Company acquired Omnilink in May 2014. Previously, Ms. Gay served as chairman, chief executive officer, and president of KnowledgeStorm, a top-ranked online marketing services company providing search, lead generation, and branding to the technology industry. Ms. Gay led KnowledgeStorm from start-up to acquisition by TechTarget (NASDAQ: TTGT) in 2007. Prior to joining KnowledgeStorm, Ms. Gay led IBM in the media, entertainment, advertising, sports, music, publishing, broadcast, and cable markets as vice president of IBM's North American Media and Entertainment division.

Mr. Gan began serving as Chief Marketing Officer on October 5, 2015. Mr. Gan most recently served as corporate VP and GM of Strategic Solutions at Syniverse. Prior to Syniverse, he served as EVP at Aicent where he led multiple functions spanning product management, marketing, strategic business development, and global sales as the company grew from startup stage to market leadership serving 200+ carriers worldwide, with most of its products and services ranked among the top three in global market share. Mr. Gan has also held executive positions for Danghong Technologies and FutureDial, both pioneering software-as-a-service providers.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the following information about these risks before buying shares of our common stock. If any of these risks occur, our business could be materially harmed, and our financial condition and results of operations could be materially and adversely affected. As a result, the price of our common stock could decline, and you could lose all or part of your investment. You should also refer to the other information contained in this Annual Report on Form 10-K for the year ended December 31, 2016 (the Annual Report) or incorporated herein by reference, including our consolidated financial statements and the notes to those statements. See also Forward-Looking Statements.

Risks Related to Our Business and Industry

We have a history of losses and are uncertain as to our future profitability.

We have had mixed success with regard to generating net income. After generating net income in each of the years 2011 to 2014, we have incurred net losses in 2015 and 2016. Beginning in the third quarter of 2015, we began to concentrate on selling higher margin, integrated managed service subscriptions that include the full suite of our devices, networks, applications and platform while moving away from the sale of individual components – especially hardware only. Because of this strategic change, our hardware revenue declined significantly in 2016 and we expect hardware revenue to remain relatively modest as compared to historical levels thereafter. Our new sales strategy may not be effective.

As a holding company, our primary material assets are our ownership interests in our subsidiaries and in certain intellectual property rights. Consequently, our operating results derive from our subsidiaries and we depend on accumulated cash flows, distributions, and other inter-affiliate transfers from our subsidiaries. In view of our limited and inconsistent history of generating net income, unproven new sales strategy, level of operating costs, and all other risk factors discussed in this annual report, we may not be profitable in the future.

The markets in which we operate are highly competitive and we may not be able to compete effectively.

We sell our products in highly competitive markets. Some of our competitors and potential competitors have significantly greater financial, technical, sales and marketing and other resources than we do. Existing or new products and services that provide alternatives to our products and services could materially impact our ability to compete in these markets. As the markets for our products and services continue to develop, additional companies, including companies with significant market presence in the IoT industry, could enter the markets in which we compete and further intensify competition. In addition, we believe price competition could become a more significant competitive factor in the future. As a result, we may not be able to maintain our historic prices and margins, which could adversely affect our business, results of operations and financial condition.

As a further result of such competition, our new solutions and sales strategy could fail to gain market acceptance. We have recently introduced several managed services including but not limited to: iManage, a supply chain and logistics optimization solution, iTank, a bulk tank liquid monitoring and distribution optimization solution, and mySHIELD, a mobile personal emergency people tracking solution for lone workers. If these solutions and services, or any of our other existing solutions and services, do not perform as expected, or if our sales fall short of expectations, our business may be adversely affected.

We operate in new and rapidly evolving markets where rapid technological change can quickly make hardware solutions and services, including those that we offer, obsolete.

The markets in which we operate are subject to rapid advances in technology, continuously evolving industry standards and regulatory requirements, and ever-shifting customer requirements. The IoT industry, in particular, is currently undergoing profound and rapid technological change. For example, many of the current subscribers we host connect to cellular networks using 2G-based devices. Several GSM-based wireless carriers have announced their intention to discontinue their 2G networks and fully deploy 3G/4G/LTE networks between 2016 and 2020. CDMA-based carriers have announced their 2G sunset for as early as 2018. While we have begun to market, sell, and support 3G/4G/LTE-based devices and service, we may not be successful in transitioning all of our 2G-based subscribers to 3G/4G/LTE and have lost, and may continue to lose customers as a result. In addition to the carriers' migrations away from 2G technology and our need to respond to that change, the introduction of unanticipated new technologies by carriers, or the development of unanticipated new end applications by our customers, could render our current solutions obsolete. In that regard, we must discern current trends and anticipate an uncertain future. We must engage in product development efforts in advance of events that we cannot be sure will happen and time our production cycles and marketing activities accordingly. If our projections are incorrect, or if our product development efforts are not properly directed and timed, or if the demands of the marketplace shift in directions that we failed to anticipate, we may lose market share and revenues as a result. To remain competitive, we continue to support engineering and development efforts intended to bring new hardware solutions and services to the markets that we serve. However, those efforts are capital intensive. If we are unable to adequately fund our engineering and development efforts, we may not be successful in keeping our product line current and in sync with advances in technology and evolving customer requirements. Even with adequate funding, our development efforts may not yield any appreciable short-term results and may never result in hardware solutions and services that produce revenues over and above our cumulative development costs or that gain traction in the marketplace, causing us to either lose market share or fail to increase and forego increased sales and revenues as a result.

If our goodwill or other intangible assets become impaired we may be required to record a significant charge to earnings.

We have significant intangible assets, including goodwill and intangible assets with indefinite lives, which are susceptible to valuation adjustments as a result of changes in various factors or conditions. The most significant intangible assets, other than goodwill, are customer relationships, patents and core technology, completed technology and trademarks. Customer relationships are amortized on a staight line basis, which approximates the pattern over which the economic benefits are being utilized. Other identifiable intangible assets are amortized on a straight-line basis over their estimated useful lives. We assess the potential impairment of intangible assets on an annual basis as well as whenever events or changes in circumstances indicate that the carrying value may not be recoverable. During the years ended December 31, 2016 and 2015, we recorded charges of $12.0 million and $2.7 million, respectively, for the impairment of goodwill and other intangible assets.

Factors that may be considered a change in circumstances, indicating that the carrying value of our goodwill or long-lived assets may not be recoverable, include the following:

- significant underperformance relative to historical or projected future operating results or cash flows;
- significant changes in the manner of or use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period;
- a decline in our market capitalization below net book value; and
- changes in our organization or management reporting structure that could result in additional reporting units, which may require alternative methods of estimating fair values or greater disaggregation or aggregation in our analysis by reporting unit.

Future adverse changes in these or other unforeseeable factors could result in additional material impairment charges that would negatively impact our results of operations and financial position in the reporting period identified.

Our internal control over financial reporting may not be effective.

During the process of completing the audit of our financial statements for the period ended December 31, 2015, management became aware of the existence of material weaknesses in the design and operation of the internal control over financial reporting related to the evaluation process for impairment of goodwill and other intangible assets, and capitalization of internally developed software that could adversely affect our ability to record, process, summarize and report financial data consistent with our assertions in the financial statements. These material weaknesses were remediated as of December 31, 2016. We may also identify additional material weaknesses and significant deficiencies in the future. If we fail to maintain the adequacy of our internal controls, including any failure to implement or difficulty in implementing required new or improved controls, our business and results of operations could be harmed, the results of operations we report could be subject to adjustments, we could incur further remediation costs, we could fail to be able to provide reasonable assurance as to our financial results or the effectiveness of our internal controls, or fail to meet our reporting obligations under SEC regulations on a timely basis and there could be a material adverse effect on the price of our common stock.

If our efforts, or those of third party service providers, to maintain the privacy and security of our customer, confidential, or sensitive information are not successful at preventing a significant data breach or cyber-attack, we could incur substantial additional costs, become subject to litigation, enforcement actions or regulatory investigation, and suffer reputational damage.

Our business, like that of many others, involves the receipt, storage and transmission of personal information and payment card information of our customers, confidential information about our employees and suppliers, and other sensitive information about our company, such as our business plans, transactions and intellectual property (confidential information). In addition, we provide confidential, proprietary and personal information to third party service providers when it is necessary to pursue business objectives.

The methods used to obtain unauthorized access, disable or degrade service, or sabotage systems are constantly changing and evolving, and may be difficult to anticipate or detect for long periods of time. Cyber-attacks, such as denial of service, advanced persistent threats, other malicious attacks, unauthorized access or distribution of confidential information by third parties or employees, errors or breaches by third party suppliers, or other breaches of security could disrupt our internal systems and applications, impair our ability to provide services to our customers, and protect the privacy and confidentiality of our sensitive information. Such attacks against companies are occurring with greater frequency and may be perpetrated by a variety of groups or persons, including those in jurisdictions where U.S. law enforcement is or has been unable to effectively address such attacks.

Although we regularly review our processes and procedures to protect against unauthorized access to or use of sensitive data and to prevent data loss, the ever-evolving threat landscape requires us to continually evaluate and adapt our systems and processes. We cannot assure you that the security measures and preventive actions we take will be adequate to repel a significant attack, prevent information security breaches or the misuses of data, unauthorized access by third parties or employees, or exploits against third party supplier environments. We may incur significant costs, be subject to regulatory investigations, sanctions and private litigation, experience disruptions to our operations or may suffer damage to our reputation that negatively impacts customer confidence as a consequence of such attacks. Although we and our third party service providers have been subjected to unsuccessful cyber-attacks in the past that have not caused significant harm to our company future cyber-attacks may materially adversely affect our business, results of operations and financial condition.

A natural disaster, terrorist attack, or other catastrophic event could diminish our ability to provide service and hardware to our customers and our revenues may be impacted by weather patterns and climate change.

Events such as severe storms, tornadoes, earthquakes, floods, solar flares, industrial accidents, and terrorist attacks including, without limitation, the actions of computer hackers, could damage or destroy both our primary and redundant facilities as well as the facilities and operations of third party cellular and satellite carriers and hardware suppliers we are reliant on, which could result in a significant disruption of our operations. Further, in the event of an emergency, the telecommunications networks that we rely upon may become capacity constrained or preempted by governmental authorities. We may also be unable, due to loss of personnel or the inability of personnel to access our facilities, to provide some services to our customers or maintain all of our operations for a period of time. With respect to our satellite-based mobile asset tracking solution in particular, sales may be influenced by weather patterns and climate change. For example, if government agencies and emergency responders anticipate relatively “mild” weather over one or more storm seasons on account of cyclical weather patterns or long-term climate change, they may buy fewer of our mobile asset tracking units for deployment in support of disaster response operations.

We are dependent on third party telecommunications service providers and other suppliers, including domestic and international cellular and satellite carriers and hardware manufacturers, the loss of any one of which could adversely impact our ability to supply or service our customers.

Our long-term success depends on our ability to operate, manage, and maintain a reliable and cost effective network, as well as our ability to keep pace with changes in technology. As described above, several wireless carriers have announced their intention to discontinue their 2G networks and fully deploy 3G, 4G and LTE networks. We, through select network service providers, intend to continue supporting 2G through at least 2020. The loss or disruption of key telecommunications infrastructure and key wireless and satellite-based network services supplied to us by carriers in the U.S., Canada, and other locations would unfavorably impact our ability to adequately service our customers. If we experience technical or logistical impediments to our ability to transfer traffic to third party facilities, or if our third party carriers experience technical or logistical difficulties of their own, such as disruptions to their supply chains caused by weather events, natural disasters, or terrorism, and are unable to carry our network traffic, we may not achieve our revenue goals or otherwise be successful in growing our business. We may not be able to continue providing service to 2G customers and may not be able to successfully transition 2G customers to other services. Given our dependence on cellular and satellite telecommunications service providers, risks specific or unique to their technologies should also be viewed as having the potential to impair our ability to provide services. For example, the loss or malfunction of a cell tower, a satellite, or a satellite ground station, could impair our ability to provide services.

We outsource our hardware manufacture to independent companies and do not have internal manufacturing capabilities to meet the demands of our customers. Any delay, interruption, or termination of our hardware manufacture could harm our ability to provide our solutions to our customers and, consequently, could have a material adverse effect on our business and operations. Our hardware manufacture requires specialized know-how and capabilities possessed by a limited number of enterprises. Consequently, we are reliant on just a few manufacturers. If a key supplier experiences production problems, financial difficulties, or has difficulties with its supply chain as a result of severe weather, a natural disaster, terrorism, or other unforeseen event, we may not be able to obtain enough units to meet demand, which could result in failure to meet our contractual commitments to our customers, further causing us to lose sales and generate less revenue.

Our operations and systems capabilities are dependent on the use of cloud services and disruptions in access to cloud services could cause both revenue impacts and degradation of our levels of customer service.

We rely heavily on both a private cloud service that we have developed and maintain as well as various public cloud services provided by third parties. In all cases, while we and third parties maintain redundant systems and backup databases and applications software in these redundant sites and we don't expect to experience downtime during which we or our customers will lack access to the cloud services, it is possible that access to the software capabilities could become impaired if the cloud service goes down and becomes inaccessible. In that event, our customer service would be impaired and this could affect our reputation as well as potentially our revenue generating capability. The extent to which cloud service accessibility could be impaired would depend upon specific facts related to the cause of the downtime which is prospectively indeterminate. However, in the event of a prolonged period of inaccessibility to our cloud services, an unfavorable material impact on our revenues and our financial results from operations may occur.

We face substantial inventory and other asset risk in addition to purchase commitment cancellation risk.

We record a write-down for product and component inventories that have become obsolete or exceed anticipated demand or net realizable value and accrue necessary cancellation fee reserves for orders of excess products and components. We also review our long-lived assets for impairment whenever events or changed circumstances indicate the carrying amount of an asset may not be recoverable. If we determine that impairment has occurred, we record a write-down equal to the amount by which the carrying value of the assets exceeds its fair market value. Although we believe the provisions related to inventory, other assets and purchase commitments are currently adequate, no assurance can be given that we will not incur additional related charges given the rapid and unpredictable pace of product obsolescence in the industries in which we compete. Such charges could materially adversely affect our financial condition and operating results.

We are contractually obligated to provide certain of our manufacturers with forecasts of our demand for components of our hardware solutions. Specific terms and conditions vary by contract, however, if our forecasts do not result in the production of a quantity of units sufficient to meet demand we may be subject to contractual penalties under certain of our contracts with our customers. By contrast, overproduction of units based on forecasts that overestimate demand could result in an accumulation of excess inventory that, under some of our contracts with our customers, would have to be managed at our expense thus adversely impacting our margins.

Excess inventory that becomes obsolete or that we are otherwise unable to sell would also be subject to write-offs resulting in adverse effects on our margins. Because our markets are volatile, competitive and subject to rapid technology and price changes, there is a risk that we will forecast incorrectly and order excess or insufficient amounts of components or products, or not fully utilize firm purchase commitments. Our financial condition and operating results could in the future be materially adversely affected by our ability to manage our inventory levels and respond to short-term shifts in customer demand patterns.

We provide product warranties to our customers which could create a substantial demand on operations to process and could result in a material impact on our results.

We are required to provide repair or replacement services on our equipment under managed service and warranty programs we offer to our customers. While our warranty obligations are passed through to our vendors who manufacture equipment on our behalf and, in the past, these claims have had an immaterial impact on our financial results from operations, there may be events in the future where we are required to take back equipment from customers for which we may be required to absorb the cost of these returns, especially under customers' managed service arrangements. Consequently, there could be a financial cost in the future related to such returns that could cause a material impact on our financial results from operations.

We may experience quality problems from time to time, resulting in decreased sales and operating margins and the loss of customers.

While we test our products and services, they may still have errors, defects, or bugs that we find only after commercial production has begun. In the past, we have experienced errors, defects, and bugs in connection with new solutions. Our customers may not make purchases from us, or may make fewer purchases, if they are concerned about such problems. Furthermore, correcting problems could require additional capital expenditures, result in increased design and development costs, and force us to divert resources from other efforts. Failure to remediate problems could result in lost revenue, harm our reputation, and lead to costly warranty or other legal claims against us by our customers, and could have a material adverse impact on our financial condition and operating results. Historically, the time required for us to correct problems has caused delays in product shipments and has resulted in lower than expected revenues.

Interruptions in service or performance problems, no matter what their ultimate cause, could undermine confidence in our services and cause us to lose customers or make it more difficult to attract new customers. In addition, because most of our customers are businesses, any significant interruption in service could result in lost profits or other losses to our customers. It may also be difficult to identify the source of the problem due to the overlay of our network with cellular, and/or satellite networks and our network's reliance on those other networks. The occurrence of hardware or software errors, regardless of whether such errors are caused by our hardware, solutions or services, or our internal facilities, may result in the delay or loss of market acceptance of our solutions, and any necessary revisions may result in significant and additional expenses. Although we attempt to disclaim or limit our liability in our agreements with our customers, a court may not enforce these limitations, which could expose us to substantial losses. While some portion of these claims and liability may be insured, we could face a material loss that could substantially impact or eliminate earnings and could materially impair cash flow.

The quality of our support and services offerings is important to our customers and if we fail to meet our service level obligations under our service level agreements or otherwise fail to offer quality support and services, we would be subject to penalties and could lose customers.

Our customers generally depend on our service organization to resolve issues relating to the use of our solutions. A high level of support is critical for the successful marketing and sale of our solutions. If we are unable to provide a level of support and service to meet or exceed the expectations of our customers, we could experience:

- loss of customers and market share;
- difficulty attracting or the inability to attract new customers, and
- increased service and support costs and a diversion of resources.

Any of the above results would likely have a material adverse impact on our business, revenue, results of operations, financial condition and reputation.

Adverse macroeconomic and market conditions could negatively affect our customers' current financial condition.

We provide enterprise solutions and solutions that are resold by our customers – primarily value-added resellers whose customers are end users of our solutions and distributors who sell to other resellers of our solutions. Many of our customers, especially value-added resellers, operate on narrow margins and are affected by overall economic conditions. Current economic conditions, while having improved recently, may deteriorate and negatively impact demand for our customers' solutions, reducing their demand for our solutions. Our customers may also face higher financing and operating costs. If current economic conditions do not continue to improve, or alternatively, worsen, we may experience reduced revenue growth or a decrease in revenues and an increase in expenses, particularly in the form of bad debts on the part of our customers. All of these and other macroeconomic factors could have a material adverse effect on demand for our solutions and on our financial condition and operating results.

Our operations are also influenced by the economic strength of the housing sector, and to a lesser extent, the oil and gas, and automotive sectors. If improvements in the housing sector are not sustained, sales of our residential and commercial alarm monitoring solutions may be impaired. If overall conditions do not continue to improve, residential and commercial consumers may decide to cancel wireless monitoring services in an effort to eliminate expenses viewed as discretionary or non-critical. Recent declines in the price of oil have depressed demand for certain of our oil and gas products and solutions, and ongoing low oil prices may continue or exacerbate the decline in this market segment. Similarly, a reversal of the recent improvement in vehicle sales would negatively impact sales of our vehicle tracking solutions.

We experience long sales cycles for some of our solutions.

Certain of our product offerings are subject to long sales cycles in view of the need for testing of our hardware solutions and services in combination with our customers' applications and third parties' technologies, the need for regulatory approvals and export clearances, and the need to resolve other complex operational and technical issues. For example, in the government contracting arena, longer sales cycles are reflective of the fact that government contracts can take months or longer to progress from a "request for proposal" to a finalized contract document pursuant to which we are able to sell a finished product or service. Delays in sales could cause significant variability in our revenue and operating results for any particular period. For that reason, quarter-over-quarter comparisons of our financial results may not always be meaningful.

A portion of our future revenue, in particular the revenue deriving from our sale of mobile asset and personal tracking solutions, may be derived from contracts with the U.S. government, state governments, or government contractors. Those contracts are subject to uncertain funding.

The funding of government programs is uncertain and, at the federal level, is dependent on continued congressional appropriations and administrative allotment of funds based on an annual budgeting process. We cannot assure that current levels of congressional funding for programs supporting our offerings will continue, particularly as a result of the Budget Control Act and the mandated substantial automatic spending cuts which began in 2013 and will last for ten years, unless Congress modifies these cuts. In particular, a significant portion of our revenues from the sale of satellite-based tracking solutions through our location-based services division has been derived from sales made by us indirectly as a subcontractor to a prime government contractor that has the direct relationship with the U.S. government. In addition, these cuts could adversely affect the viability of the prime contractor of our program. If the prime contractor loses business with respect to which we serve as a subcontractor, our government business would be hurt.

Our operating results may be negatively affected by developments affecting government programs generally, including the following:

- changes in government programs that are related to our hardware solutions and services;
- adoption of new laws or regulations relating to government contracting or changes to existing laws or regulations; changes in political or public support for programs;
- delays or changes in the government appropriations process; and
- delays in the payment of invoices by government payment offices and the prime contractors.

These developments and other factors could cause governmental agencies to reduce their purchases under existing contracts, to exercise their rights to terminate contracts at-will or to abstain from renewing contracts, any of which would cause our revenue to decline and could otherwise harm our business, financial condition and results of operations.

Government contracts contain provisions that are unfavorable to us.

Government contracts contain provisions, and are subject to laws and regulations, that give the government rights and remedies not typically found in commercial contracts. These provisions may allow the government to

- terminate existing contracts for convenience, as well as for default;
- reduce or modify contracts or subcontracts;
- cancel multi-year contracts and related orders if funds for contract performance for any subsequent year become unavailable;
- decline to exercise an option to renew a multi-year contract;
- claim rights in our hardware solutions and services;
- suspend or debar us from doing business with the federal government or with a governmental agency; and
- control or prohibit the export of our hardware solutions and services.

If the government terminates a contract for convenience, we may recover only our incurred or committed costs, settlement expenses and profit on work completed prior to the termination. If the government terminates a contract for default, we may not recover even those amounts, and instead may be liable for excess costs incurred by the government in procuring undelivered items and services from another source. We may experience performance issues on some of our contracts. We may receive show cause or cure notices under contracts that, if not addressed to the government's satisfaction, could give the government the right to terminate those contracts for default or to cease procuring our services under those contracts in the future.

Agreements with government agencies may lead to regulatory or other legal action against us including, without limitation, claims against us under the Federal False Claims Act or other federal statutes. These claims could result in substantial fines and other penalties.

We must comply with a complex set of rules and regulations applicable to government contractors and their subcontractors. Failure to comply with an applicable rule or regulation could result in our suspension of doing business with the government, or with the prime government contractors, or cause us to incur substantial penalties. Our agreements with the U.S. government are subject to substantial financial penalties under the Civil Monetary Penalties Act and the False Claims Act and, in particular, actions under the False Claims Act's "whistleblower" provisions. Private enforcement of fraud claims against businesses on behalf of the U.S. government has increased due in large part to amendments to the False Claims Act that encourage private individuals to sue on behalf of the government. These whistleblower suits by private individuals, known as qui tam actions, may be filed by almost anyone, including present and former employees. The False Claims Act statute provides for treble damages and up to $11,000 per claim on the basis of the alleged claims. Prosecutions, investigations or *qui tam* actions could have a material adverse effect on our liquidity, financial condition and results of operations.

Finally, various state false claim and anti-kickback laws also may apply to us. Violation of any of the foregoing statutes can result in criminal and/or civil penalties that could have a material adverse effect our business.

Economic and market conditions may adversely affect our business and financial performance, as well as our access to financing on favorable terms or at all.

Our business and financial performance are sensitive to changes in general economic conditions, including interest rates, consumer credit conditions, consumer debt levels, consumer confidence, rates of inflation (or concerns about deflation), unemployment rates, economic growth, energy costs and other macro-economic factors. Difficult, or worsening, general economic conditions could have a material adverse effect on our business, financial condition and results of operations.

Market volatility, economic uncertainty, and weak economic conditions may materially adversely affect our business and financial performance in a number of ways. Our services are available to a broad customer base, a significant segment of which may be more vulnerable to weak economic conditions. We may have greater difficulty in gaining new customers within this segment and existing customers may be more likely to terminate service due to an inability to pay.

Weak economic conditions and credit conditions may also adversely impact our suppliers and customers, some of which may be experiencing cash flow or liquidity problems or are unable to obtain or refinance credit such that they may no longer be able to operate. Any of these could adversely impact our ability to distribute, market, or sell our products and services.

In addition, instability in the global financial markets could lead to periodic volatility in the credit, equity and fixed income markets. This volatility could limit our access to the credit markets, leading to higher borrowing costs or, in some cases, the inability to obtain financing on terms that are acceptable to us, or at all.

We may require additional capital to fund further development, and our competitive position could decline if we are unable to obtain additional capital, or access the credit markets.

To address our long-term capital needs, we intend to continue to pursue strategic relationships that would provide resources for the further development of our product candidates. There can be no assurance, however, that these discussions will result in relationships or additional funding. In addition, we may seek to raise capital through the public or private sale of securities, if market conditions are favorable for doing so. If we are successful in raising additional funds through the issuance of equity securities, stockholders will likely experience dilution, or the equity securities may have rights, preferences, or privileges senior to those of the holders of our common stock. If we raise funds through the issuance of debt securities, those securities would have rights (directly or indirectly), preferences, and privileges senior to those of our common stock.

Our loan agreement contains financial and operating restrictions that may limit our access to credit. If we fail to comply with covenants in the loan agreement, we may be required to repay any potential indebtedness thereunder, which may have an adverse effect on our liquidity and, in turn, may have a material adverse effect on our financial condition and operating results.

We have substantial debt obligations. The loan is guaranteed by certain of our subsidiaries and secured by substantially all of our assets. The loan contains a number of customary affirmative and negative covenants and events of default, which, among other things, restrict our ability, and our subsidiaries' ability, to incur debt, allow liens on assets, make investments, pay dividends or prepay certain other debt. The loan also requires that we comply with certain financial maintenance covenants, including maintaining a minimum adjusted EBITDA, maximum consolidated total net leverage, and minimum liquidity. We were not in compliance with our covenants as of December 31, 2016. We have obtained waivers of non-compliance from Crystal Financial LLC. and amended our financial covenants as of March 31, 2017.

Our substantial level of debt and related obligations, including interest payments, covenants and restrictions, could have important consequences, including by:

- impairing our ability to invest in and successfully grow our business and make acquisitions;
- limiting our ability to obtain additional financing on satisfactory terms to fund our working capital requirements, capital expenditures, acquisitions, debt obligations and other general corporate requirements;
- hindering our ability to raise equity capital, because, in the event of a liquidation of our business, debt holders have priority over equity holders;
- increasing our vulnerability to general economic downturns, competition and industry conditions, which could place us at a competitive disadvantage compared to competitors that are less leveraged and therefore we may be unable to take advantage of opportunities that our leverage prevents us from exploiting;
- imposing additional restrictions on the manner in which we conduct our business, including restrictions on our ability to pay dividends, incur additional debt and sell assets; and
- placing us at a possible disadvantage relative to less leveraged competitors and competitors that have better access to capital resources.

The occurrence of any one of these events could have an adverse effect on our business, financial condition, operating results or cash flows and ability to satisfy our obligations under our indebtedness. Our failure to comply with the covenants under the loan could result in an event of default and the acceleration of any debt then outstanding. Any declaration of an event of default could significantly harm our business and prospects and could cause our stock price to decline. Insufficient funds may require us to delay, scale back or eliminate some or all of our activities **.**

We rely on highly-skilled personnel throughout all levels of our business. Our business could be harmed if we are unable to retain or motivate key personnel, hire qualified personnel or maintain our corporate culture.

In our industry, there is substantial and continuous competition for highly-skilled business, product development, technical, and other personnel. If any of our key employees were to leave, we could face substantial difficulty in hiring qualified successors and could experience a loss in productivity while any successor obtains the necessary training and experience. Our employment relationships are generally at-will and we have had key employees leave in the past. We cannot assure you that one or more key employees will not leave in the future. We intend to continue to hire additional highly qualified personnel, including engineers and operational personnel, but may not be able to attract, assimilate or retain qualified personnel in the future. Any failure to attract, integrate, motivate and retain these employees could harm our business.

We believe that our future success depends in substantial part on our ability to recruit, hire, motivate, develop, and retain talented and highly-skilled personnel. Doing so may be difficult due to many factors, including fluctuations in economic and industry conditions, competitors' hiring practices, employee tolerance for the significant amount of change within and demands on our company and our industry, and the effectiveness of our compensation programs. Our continued ability to compete effectively depends on our ability to retain and motivate our existing employees and to attract new employees. If we do not succeed in retaining and motivating our existing key employees and in attracting new key personnel, we may not be able to meet our business plan and, as a result, our revenue growth and profitability may be materially adversely affected.

If we achieve our growth goals, we may be unable to manage our resulting expansion.

To the extent that we are successful in implementing our business strategy, we may experience periods of rapid expansion and corresponding demand for our products. In order to effectively manage growth, whether organic or through acquisitions, we will need to maintain and improve our operations, including the ability to quickly scale our products, and effectively train and manage our employees. Our expansion through acquisitions is contingent on successful management of those acquisitions, which will require proper integration of new employees, processes and procedures, and information systems, which can be both difficult and demanding from an operational, managerial, cultural, and human resources perspective. We must also expand the capacity of our sales and distribution networks in order to achieve continued growth in our existing and future markets. The failure to manage growth effectively in any of these areas could have a material adverse effect on our financial condition and operating results.

Risks related to Legal and Regulatory Matters

We are subject to risks associated with laws, regulations and industry-imposed standards related to fixed and mobile communications devices and associated services.

Laws and regulations related to fixed and mobile communications devices and associated services and end applications are extensive, vary by jurisdiction, and are subject to change. Such changes, could include, without limitation, restrictions on the production, manufacture, distribution, and use of communications devices, restrictions on the ability to port devices and associated services to new carriers' networks, requirements to make devices and associated services compatible with more than one carrier's network, or restrictions on end use could, by preventing us from fully serving affected markets, have a material adverse effect on our financial condition and operating results.

In particular, communication devices we sell, or which our customers wish us to support, are subject to regulation or certification by governmental agencies such as the Federal Communications Commission (FCC), industry standardization bodies such as the PCS Type Certification Review Board (PTCRB), and particular carriers for use on their networks. The procedures for obtaining required regulatory approvals and certifications are extensive and time consuming. The process of obtaining regulatory approval may require us to conduct additional testing, make modifications to our hardware solutions and services, or cause a delay in product launch and shipment dates, any of which could have a material adverse effect on our financial condition and operating results.

Our business is subject to a variety of U.S. and international laws, rules, policies and other obligations regarding data protection.

We are subject to federal, state and international laws relating to the collection, use, retention, security and transfer of personally identifiable information. In many cases, these laws apply not only to third-party transactions, but also to transfers of information between us and our subsidiaries, and among us, our subsidiaries and other parties with which we have commercial relations. Several jurisdictions have passed recent laws in this area, and other jurisdictions are considering imposing additional restrictions. These laws continue to develop and may be inconsistent from jurisdiction to jurisdiction. Complying with emerging and changing international requirements may cause us to incur substantial costs or require us to change our business practices. Noncompliance could result in penalties or significant legal liability.

Our privacy policies and practices concerning the use and disclosure of data are posted on our website. Any failure by us, our suppliers or other parties with whom we do business to comply with our posted privacy policies or with other federal, state or international privacy-related or data protection laws and regulations could result in proceedings against us by governmental entities or others, which could have a material adverse effect on our business, results of operations and financial condition.

We are also subject to payment card association rules and obligations under our contracts with payment card processors. Under these rules and obligations, if information is compromised, we could be liable to payment card issuers for the cost of associated expenses and penalties. In addition, if we fail to follow payment card industry security standards, even if no customer information is compromised, we could incur significant fines or experience a significant increase in payment card transaction costs.

Changes in domestic tax regulations or unanticipated foreign tax liabilities could affect our results.

The issuance by the Internal Revenue Service and/or state tax authorities of new tax regulations or changes to existing standards and actions by federal, state or local tax agencies and judicial authorities with respect to applying applicable tax laws and regulations could impose costs on us that we are unable to fully recover.

We are doing business in, and are expanding into, foreign tax jurisdictions. We believe that we have complied in all material respects with our obligations to pay taxes in these jurisdictions. If the applicable taxing authorities were to challenge successfully our current tax positions, or if there were changes in the manner in which we conduct our activities, we could become subject to material unanticipated tax liabilities. We may also become subject, prospectively or retrospectively, to additional tax liabilities following changes in tax laws. The application of existing, new or future laws could have adverse effects on our business, prospects and operating results. There have been, and will continue to be, substantial ongoing costs associated with complying with the various indirect tax requirements in the numerous markets in which we conduct or will conduct business.

The loss of intellectual property protection, both in the U.S. and internationally, could have a material adverse effect on our operations.

Our future success and competitive position depend upon our ability to obtain and maintain intellectual property protection, especially with regard to our core business. We cannot be sure that steps taken by us to protect our technology will prevent misappropriation of the technology. Our services are highly dependent upon our technology and the scope and limitations of our proprietary rights therein. If our assertion of proprietary rights is held to be invalid, or if another party's use of our technology were to occur to any substantial degree, our business, financial condition and results of operations could be materially adversely affected. In order to protect our technology, we rely on a combination of patents, copyrights, and trade secret laws, as well as certain customer licensing agreements, employee and customer confidentiality and non-disclosure agreements, and other similar arrangements. Loss of such protection could compromise any advantage obtained and, therefore, impact our sales, market share, and results. To the extent that our licensees develop inventions or processes independently that may be applicable to our hardware solutions and services, disputes may arise as to the ownership of the proprietary rights to this information. These inventions or processes will not necessarily become our property, but may remain the property of these licensees or their full-time employers. We could be required to make payments to the owners of these inventions or processes, in the form of either cash or equity, or a combination of both.

Furthermore, our future or pending patent applications may not be issued with the scope of the claims sought by us, if at all. In addition, others may develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents owned or licensed by us. Effective patent, trademark, copyright, and trade secret protection may be unavailable or limited in foreign countries where we may need protection.

We rely on access to third-party patents and intellectual property, and our future results could be materially adversely affected if we are unable to secure such access in the future.

Many of our hardware solutions and services are designed to include third-party intellectual property, and in the future we may need to seek or renew licenses relating to such intellectual property. Although we believe that, based on past experience and industry practice, such licenses generally can be obtained on reasonable terms; there is no assurance that the necessary licenses would be available on acceptable terms or at all. Some licenses we obtain may be nonexclusive and, therefore, our competitors may have access to the same technology licensed to us. If we fail to obtain a required license or are unable to design around a patent, we may be unable to sell some of our hardware solutions and services, and there can be no assurance that we would be able to design and incorporate alternative technologies, without a material adverse effect on our business, financial condition, and results of operations.

Our competitors have or may obtain patents that could restrict our ability to offer our solutions and services, or subject us to additional costs, which could impede our ability to offer our solutions and services and otherwise adversely affect us. We may, from time to time, also be subject to litigation over intellectual property rights or other commercial issues .

Several of our competitors have obtained and can be expected to obtain patents that cover solutions and services directly or indirectly related to those offered by us. There can be no assurance that we are aware of all patents containing claims that may pose a risk of infringement by its solutions and services. In addition, in some cases, patent applications in the United States are kept confidential until a patent is issued and, accordingly, we cannot fully evaluate the extent to which our solutions and services may infringe on future patent rights held by others.

Even with technology that we develop independently, a third party may claim that we are using inventions covered by their patents and may go to court to stop us from engaging in our normal operations and activities, such as engineering and development and the sale of any of our solutions and services. Furthermore, because of technological changes in the IoT industry, current extensive patent coverage, and the rapid issuance of new patents, it is possible that certain components of our solutions, services, and business methods may unknowingly infringe the patents or other intellectual property rights of third parties. From time to time, we have been notified that we may be infringing such rights.

In the highly competitive and technology-dependent telecommunications field in particular, litigation over intellectual property rights is a significant business risk, and some entities are pursuing a litigation strategy the goal of which is to monetize otherwise unutilized intellectual property portfolios via licensing arrangements entered into under threat of continued litigation. Regardless of merit, responding to such litigation can consume significant time and expense. In certain cases, we may consider the desirability of entering into licensing agreements, although no assurance can be given that such licenses can be obtained on acceptable terms or that litigation will not occur. If we are found to be infringing such rights, we may be required to pay substantial damages. If there is a temporary or permanent injunction prohibiting us from marketing or selling certain solutions and services or a successful claim of infringement against us requires us to pay royalties to a third party, our financial condition and operating results could be materially adversely affected, regardless of whether we can develop non-infringing technology. While in management’s opinion we do not have a potential liability for damages or royalties from any known current legal proceedings or claims related to the infringement of patent or other intellectual property rights that would individually or in the aggregate have a material adverse effect on our financial condition and operating results, the results of such legal proceedings cannot be predicted with certainty. Should we fail to prevail in any of the matters related to infringement of patent or other intellectual property rights of others or should several of these matters be resolved against us in the same reporting period, our financial condition and operating results could be materially adversely affected.

We operate internationally, which subjects us to international regulation and business uncertainties that create additional risk for us.

We have been doing business directly, or via our distributors, primarily in the United States and North America, and are expanding, directly or via our distributors, into additional countries worldwide. Accordingly, we or our distributors are subject to additional risks, such as:

- an international economic downturn;
- export control requirements, including restrictions on the export of critical technology;
- restrictions imposed by local laws and regulations;
- restrictions imposed by local product certification requirements;

- currency exchange rate fluctuations;
- generally longer receivable collection periods and difficulty in collecting accounts receivable;
- trade restrictions and changes in tariffs;
- difficulties in repatriating earnings;
- difficulties in staffing and managing international operations; and
- potential insolvency of channel partners.

We have only limited experience in marketing and operating our services in certain international markets. Moreover, we have in some cases experienced and expect to continue to experience in some cases higher costs as a percentage of revenues in connection with establishing and providing services in international markets versus the U.S. In addition, certain international markets may be slower than the U.S. in adopting the outsourced communications solutions and so our operations in international markets may not develop at a rate that supports our level of investments.

Furthermore, because regulatory schemes vary by country, we may also be subject to regulations in foreign countries of which we are not presently aware. If that were to be the case, we could be subject to sanctions by a foreign government that could materially and adversely affect our ability to operate in that country. We cannot assure that any current regulatory approvals held by us are, or will remain, sufficient in the view of foreign regulatory authorities, or that any additional necessary approvals will be granted on a timely basis or at all, in all jurisdictions in which we operate or wish to operate, or that applicable restrictions in those jurisdictions will not be unduly burdensome. The failure to obtain the authorizations necessary to operate satellites internationally could have a material adverse effect on our ability to generate revenue and our overall competitive position. We, our customers and companies with which we do business may be required to have authority from each country in which we or they provide services or provide our customers use of our hardware solutions and services. Because regulations in each country are different, we may not be aware if some of our customers and/or companies with which we do business do not hold the requisite licenses and approvals.

We purchase from vendors located outside of the United States and consequently rely upon transportation from such vendors that is outside our control.

Several of the products we sell are manufactured by vendors who are located outside of the United States. Transportation time varies considerably for these products, especially in the case of transport involving ocean freight and local customs clearing processes in the country of origin. Both transportation and customs issues which may cause delays are especially relevant and complicated for products sourced from manufacturers located in Asia. As a result, we may face delays in committed deliveries that could either result in charges from our customers or, at times, cancelled orders. While we have not had any incidence of meaningful cost related to such exposure to date, there can be no assurance that there will not be a financial impact from such events in the future.

Results of legal proceedings could materially adversely affect us.

We are involved in various legal proceedings and claims that have arisen out of the ordinary conduct of our business. Results of legal proceedings cannot be predicted with certainty. Regardless of its merit, litigation may be both time-consuming and disruptive to our operations and cause significant expense and diversion of management attention. In recognition of these considerations, we may enter into material settlements. Should we fail to prevail in certain matters, or should several of these matters be resolved against us in the same reporting period, we may be faced with significant monetary damages or injunctive relief against us that would materially adversely affect a portion of our business and might materially affect our financial condition and operating results.

Risks Related to Ownership of our Common Stock

Because our stock is held by a relatively small number of investors and is thinly traded, it may be more difficult for shareholders to sell our shares or buy additional shares when they desire and share prices may be volatile.

Our common stock is currently listed on the NASDAQ. Our stock is thinly traded and we cannot guarantee that an active trading market will develop, or that it will maintain its current market price. A large number of shares of our common stock are held by a small number of investors. An attempt to sell a large number of shares by a large holder could materially adversely affect the price of our stock. In addition, it may be difficult for a purchaser of our shares of our common stock to sell such shares without experiencing significant price volatility. Because our shares are thinly traded, in some cases attempts to sell a large number of shares may be unsuccessful at any price due to insufficient buy side demand to complete a sell side trade.

The exercise or conversion of outstanding stock options and stock appreciation rights into common stock will dilute the percentage ownership of our other shareholders and the sale of such shares may adversely affect the market price of our common stock.

As of March 30, 2017, there are outstanding stock options and stock-settled stock appreciation rights to purchase an aggregate of approximately 1.5 million shares of our common stock and more stock options and stock appreciation rights will likely be granted in the future to our officers, directors, employees and consultants. We may issue warrants in connection with acquisitions, borrowing arrangements or other strategic or financial transactions. The exercise of outstanding stock options, stock appreciation rights and warrants will dilute the percentage ownership of our other shareholders. The exercise of these stock options, stock appreciation rights and warrants and the subsequent sale of the underlying common stock could cause a decline in our stock price.

Our stock price may be volatile, and may fluctuate based upon factors that have little or nothing to do with our business, financial condition and operating results.

The trading prices of the securities of communications companies historically have been highly volatile, and the trading price of our common stock may be subject to wide fluctuations. Our stock price may fluctuate in reaction to a number of events and factors that may include, among other things:

- our or our competitors' actual or anticipated operating and financial results; introduction of new products and services by us or our competitors or changes in service plans or pricing by us or our competitors;
- analyst projections, predictions and forecasts, analyst target prices for our securities and changes in, or our failure to meet, securities analysts' expectations;
- entry of new competitors into our markets or perceptions of increased price competition, including a price war;
- our performance, including subscriber growth, and our financial and operational metric performance;
- market perceptions relating to our services, devices, network, applications and platform;
- market perceptions of the wireless communications industry and valuation models for us and the industry;
- the availability or perceived availability of additional capital in general and our access to such capital;
- actual or anticipated consolidation, or other strategic mergers or acquisition activities involving us or our competitors or market speculations regarding such activities; and
- disruptions of our operations or service providers or other vendors necessary to our network operations; the general state of the U.S. and world economies.

In addition, the stock market has been volatile in the recent past and has experienced significant price and volume fluctuations, which may continue for the foreseeable future. This volatility has had a significant impact on the trading price of securities issued by many companies, including companies in the communications industry. These changes frequently occur irrespective of the operating performance of the affected companies. Hence, the trading price of our common stock could fluctuate based upon factors that have little or nothing to do with our business, financial condition and operating results.

The structure of our company limits the voting power of our stockholders and certain factors may inhibit changes in control of our company.

The concentration of ownership of our common stock may have the effect of delaying, deferring, or preventing a change in control, merger, consolidation, or tender offer that could involve a premium over the price of our common stock. Currently, our executive officers, directors and greater-than-five percent stockholders and their affiliates, in the aggregate, beneficially own approximately 49% of our outstanding common stock. These stockholders, if they vote together, are able to exercise significant influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions and matters. The interests of these stockholders may be different than those of our unaffiliated stockholders and our unaffiliated stockholders may be dissatisfied with the outcome of votes that may be controlled by our affiliated stockholders.

Our articles of incorporation generally limit holdings by persons of our common stock to no more than 10% without prior approval by our Board. Except as otherwise permitted by the Board, no stockholder has the right to cast more than 10% of the total votes regardless of the number of shares of common stock owned. In addition, if a person acquires holdings in excess of this ownership limit, our Board may terminate all voting rights of the person during the time that the ownership limit is violated, bring a lawsuit against the person seeking divestiture of amounts in excess of the limit, or take other actions as the Board deems appropriate. Our articles of incorporation also have a procedure that gives us the right to purchase shares of common stock held in excess of the ownership limit. In addition, our articles of incorporation permit our Board to authorize the issuance of preferred stock without stockholder approval. Any future series of preferred stock may have voting provisions that could delay or prevent a change in control or other transaction that might involve a premium price or otherwise be in the best interests of our common stockholders. In addition to inhibiting changes of control, the provisions of our Articles of Incorporation may suppress the price of our shares.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

All of our facilities are leased. Set forth below is certain information with respect to our leased facilities:

Location	Principal Business	Square Footage	Lease Expiration
Atlanta, Georgia	Principal Executive Office – Facility is subleased under a short term agreement	10,450	2017
Atlanta, Georgia	Former Principal Executive Office –currently under sublease	47,062	2022
Dallas, Texas	Network Services, Engineering and Development and Sales	13,256	2018
Alpharetta, Georgia	Sales and Administrative	12,945	2017
Alpharetta, Georgia	Warehousing and Logistics	10,701	2019
Edmond, Oklahoma	Network Services and Sales/Support	1,000	2017
Doylestown, Pennsylvania	Sales and Administrative	905	2017

We conduct engineering, sales and marketing, and administrative activities at many of these locations. We believe that our existing facilities are adequate for our current needs. As we grow and expand into new markets and develop additional hardware, we may require additional space, which we believe will be available at reasonable rates.

We engage in limited manufacturing, equipment and hardware assembly and testing for certain hardware. We also use contract manufacturers for production, sub-assembly and final assembly of certain hardware and a third-party logistics service provider to manage a portion of our inventory. We believe there are other manufacturers and service providers that could perform this work on comparable terms.

Item 3. Legal Proceedings.

From time to time we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows. Regardless of the outcome, litigation can have an adverse effect on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for the Registrant's Common Stock and Related Shareholder Matters and Issuer Purchases of Equity Securities.

The Company’s Common Stock trades publicly on the NASDAQ Global Market System under the symbol “NMRX”.

The following table sets forth, for the fiscal quarters indicated, the high and low sales prices per share for the Common Stock on the NASDAQ Global Market for the applicable periods.

Fiscal 2016	**High**	**Low**
First Quarter (January 1 to March 31, 2016)	$ 7.34	$ 5.68
Second Quarter (April 1 to June 30, 2016)	8.37	5.96
Third Quarter (July 1 to September 30, 2016)	8.36	6.49
Fourth Quarter (October 1 to December 31, 2016)	9.01	6.65

Fiscal 2015	**High**	**Low**
First Quarter (January 1 to March 31, 2015)	$ 11.60	$ 10.01
Second Quarter (April 1 to June 30, 2015)	12.31	8.16
Third Quarter (July 1 to September 30, 2015)	9.50	7.79
Fourth Quarter (October 1 to December 31, 2015)	9.25	5.91

On March 30, 2017, the last reported sale price of our Class A common stock on The NASDAQ Global Market was $4.53 per share.

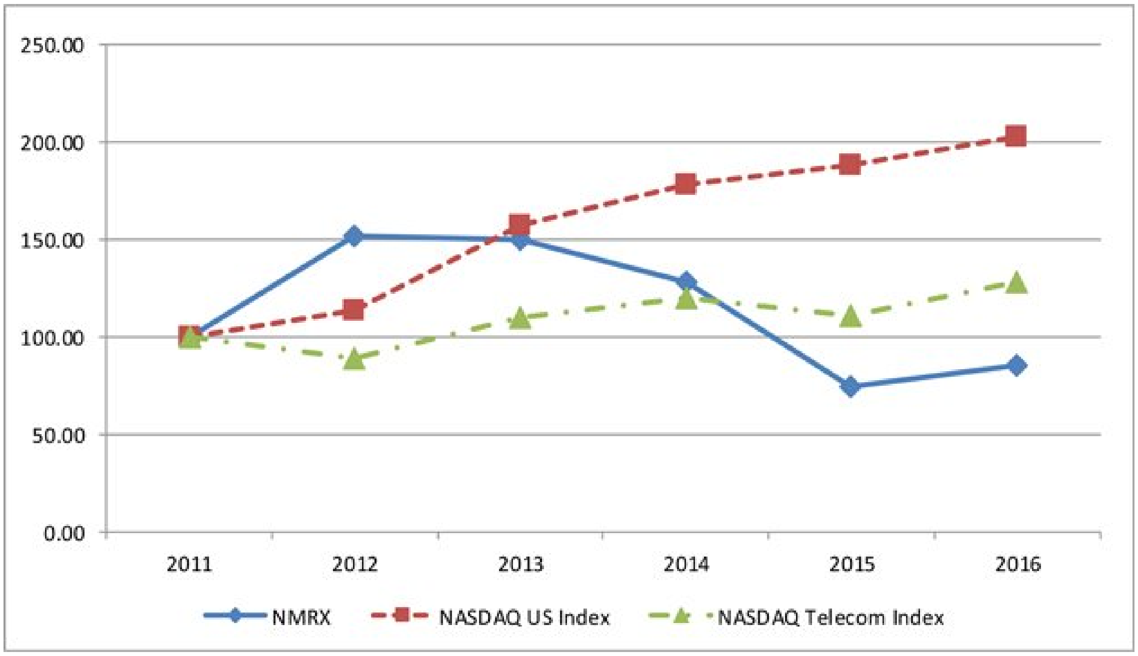
As of March 30, 2017, there were approximately 119 holders of record of our Common Stock and 19.6 million shares of Common Stock outstanding. Because many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividend Policy

We currently do not pay any cash dividends. In deciding whether or not to declare or pay dividends in the future, the Board of Directors will consider all relevant factors, including our earnings, financial condition and working capital, capital expenditure requirements, any restrictions contained in loan agreements and market factors and conditions. We have no plans now or in the foreseeable future to declare or pay cash dividends on our common stock.

Performance Graph

The following graph shows a comparison of the cumulative total shareholder return on our common stock, the NASDAQ Composite Index and the NASDAQ Telecomm Index, over the preceding five-year period. The indices assume the reinvestment of all dividends.



SHAREHOLDER VALUE AT YEAR END						
	2011	2012	2013	2014	2015	2016
NMRX	100.00	152.00	149.80	127.94	74.26	85.60
NASDAQ US Index	100.00	113.82	157.44	178.53	188.75	202.92
NASDAQ Telecom Index	100.00	89.13	110.54	120.38	111.36	127.91

The comparison of total return on investment (change in year-end stock price plus reinvested dividends) assumes that $100 was invested on December 31, 2011 in our common stock, the NASDAQ Composite Index and the NASDAQ Telecomm Index.

The corporate performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference into such filing.

Item 6. Selected Consolidated Financial Data.

The following selected financial data should be read in conjunction with the consolidated financial statements and the notes contained in "Item 8. Financial Statements and Supplementary Data" and the information contained in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. Historical results are not necessarily indicative of future results.

The following financial information was derived using the consolidated financial statements of Numerex Corp. The table lists historical financial data of the Company for each of the five years in the period ended December 31, 2016 **.**

(in thousands except per share data)	As of and For the Years Ended December 31, 2016	2015	2014 [1]	2013	2012
Statement of Operations Data					
Net revenues	$ 70,645	$ 89,450	$ 93,869	$ 77,832	$ 65,032
Gross profit [2]	34,114	38,441	43,264	32,140	27,875
Impairment of goodwill and other intangible assets	12,005	2,712	-	-	-
Restructuring charges	1,831	-	-	-	-
Operating (loss) income	(22,802)	(8,583)	2,115	(419)	2,967
(Loss) income from continuing operations before income taxes	(24,660)	(9,255)	2,655	(404)	2,131
Income tax expense (benefit) [3]	(340)	9,902	419	(2,369)	(4,902)
(Loss) income from continuing operations, net of income taxes	(24,320)	(19,157)	2,236	1,965	7,033
(Loss) income from discontinued operations, net of income taxes	-	-	(492)	(1,380)	132
Net (loss) income	(24,320)	(19,157)	1,744	585	7,165
Basic (loss) earnings per share:					
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12	$ 0.11	$ 0.46
Loss from discontinued operations	-		(0.03)	(0.08)	-
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09	$ 0.03	$ 0.46
Diluted (loss) earnings per share:					
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12	$ 0.10	$ 0.44
(Loss) income from discontinued operations	-		(0.03)	(0.07)	0.01
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09	$ 0.03	$ 0.45
Balance Sheet Data					
Cash, cash equivalents, and short term investments	$ 9,285	$ 16,237	$ 17,270	$ 25,603	$ 4,948
Total assets	91,477	111,187	130,943	101,290	72,147
Total short- and long-term debt and capital lease obligations	17,248	18,909	23,749	1,562	8,294
Shareholders' equity	51,264	72,596	88,862	83,977	52,805
Cash Flow Data					
Net cash provided by (used in) continuing operations	(492)	8,877	10,456	6,088	1,924

(1) On May 5, 2014, we acquired the business operations of Omnilink, the financial results of which have now been included in our results. The consolidated financial data, as reported and shown above, include results from Omnilink since the date of acquisition. Included in the 2014 financial data shown above are revenues, cost of revenues and gross profit related to Omnilink of $8.7 million, $3.8 million and $4.9 million, respectively.

(2) Gross profit for the year ended December 31, 2015 includes a $1.3 million impairment of other assets. See Note H- Prepaid Expenses and Other Assets in the accompanying consolidated financial statements.

(3) During the year ended December 31, 2015, we recognized $9.9 million in deferred income tax expense to record a valuation allowance against certain deferred tax assets. See Note K – Income Taxes in the accompanying consolidated financial statements. During the year ended December 31, 2013, we recognized a $2.4 million deferred income tax benefit from a tax accounting method change allowing a one-time acceleration and catch-up of depreciation and amortization expense. During the year ended December 31, 2012, we recognized a deferred income tax benefit of $4.9 million from the release of a valuation allowance against certain deferred tax assets.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This management's discussion and analysis of financial condition and results of operations contains forward-looking statements that involve risks and uncertainties. See "Forward Looking Statements" on page 4 for a discussion of the uncertainties, risks and assumptions associated with these statements. You should read the following discussion in conjunction with our historical consolidated financial statements and the notes thereto appearing elsewhere in this Annual Report. The results of operations for the periods reflected herein are not necessarily indicative of results that may be expected for future periods and our actual results may differ materially from those discussed in the forward-looking statements as a result of various factors, including but not limited to those listed under "Risk Factors" in Section 1A of this Annual Report.

Overview

We are a holding company and, through our subsidiaries, are a single source, leading provider of managed enterprise solutions enabling the Internet of Things (IoT). We empower enterprise operations with world-class, managed IoT solutions that are simple, innovative, scalable and secure. An IoT solution is generally viewed as a combination of devices, software and services that operate with little or no human interaction. Our solutions incorporate each of the four key IoT building blocks – Device, Network, Application and Platform.

Our network services are provided through cellular, satellite, broadband and wireline networks. Cellular networks include national and regional carriers and consist of second (2G), third (3G) and fourth generation (4G and LTE) technology. Several wireless carriers have announced their intention to discontinue their 2G networks and fully deploy 3G and 4G networks between 2016 and 2020 while other carriers have announced their intention to discontinue 2G networks as early as 2020. We intend to continue support existing 2G customers through the transition to subsequent technology. Additionally, we have introduced 3G/4G products offering advanced services across our product lines.

Beginning in the third quarter of 2015, we began to concentrate on selling higher margin, integrated managed service subscriptions that include the full suite of our devices, networks, applications and platform while moving away from the sale of individual components – especially hardware only. We expect this strategic change to help us grow sustainable service revenue along with corresponding gross margins. However, our hardware revenues declined significantly as expected in 2016, and we expect that hardware revenues will remain relatively modest as compared to historical levels thereafter.

On May 5, 2014, we merged with the business operations of Omnilink. Omnilink provides tracking and monitoring services for people and valuable assets via Omnilink's proprietary IoT platform that connects hardware, networks, software, and support services. The consolidated financial data, as reported and shown above, include results of Omnilink from the date of acquisition. The merger consideration was $37.5 million cash.

During the year ended December 31, 2016, we had revenues of $70.6 million and net loss of $24.3 million. This compares with revenues of $89.5 million and net loss of $19.2 million for the year ended December 31, 2015.

Our core strategy is to generate long term and sustainable recurring revenue through a portfolio of managed, end-to-end IoT solutions which are generally sold on a subscription basis and built on our horizontal, integrated platform. Our solutions incorporate the key IoT building blocks – Device, Network, Application and Platform. Our solutions also simplify the implementation and improve the speed to market for enterprise users in select, targeted verticals in the asset monitoring and optimization, asset tracking, and safety and security markets.

Our strategy requires significant capital investment to develop and enhance our use of technology and to maintain our leadership position and competitive advantage in the markets we serve.

Subscription revenue is recognized monthly as services are provided and sales of embedded devices and hardware are recognized when title passes. Other upfront payment revenue is deferred and amortized on a straight line basis.

Due to fluctuations of the commencement of new contracts and renewal of existing contracts, we expect variability of sequential quarterly trends in revenues, margins and cash flows. Other factors contributing to sequential quarterly trends include usage, rate changes, and repricing of contract renewals and technology changes.

Cost of sales for the year ended December 31, 2016 includes an increase in the inventory reserve of $0.5 million and a significant decrease in cost of revenue for embedded devices and hardware of $10.0 million associated with the decrease in hardware revenues.

During the year ended December 31, 2016, management evaluated and determined that the Omnilink and Do-It-Yourself (DIY) product lines and reporting units should be tested at June 30, 2016 for impairment as a result of lower than expected operating results, which are related to strategic changes and delays associated with the launch of a new personal tracking product line. Management initiated a quantitative two-step goodwill impairment test by comparing the carrying value of the net assets of the respective units to its fair value based on a discounted cash flow analysis. Based on our assessment, we determined that the fair value of these reporting units were less than the respective carrying value and that goodwill was impaired, and recorded $4.2 million in impairment charges for trade names, technology and goodwill as of June 30, 2016, comprised of impairments of $1.6 million for indefinite-lived trade names and $2.3 million for goodwill of the Omnilink reporting unit, and $0.1 million for technology and $0.2 million for goodwill of the DIY reporting unit.

As part of our annual assessment of goodwill at December 1, 2016, the carrying values of our Omnilink and DIY reporting units were found to be greater than their calculated fair values. Accordingly, we performed a Step 2 analysis for these reporting units and recorded goodwill impairment of $7.4 million for our Omnilink reporting unit. No impairment was recorded as a result of the Step 2 analysis for the DIY reporting unit. Also as part of our December 1, 2016 assessment we recorded $0.4 million of impairment related to the Omnilink Trade Name. The decrease in the fair value of the DIY reporting unit was principally due to the reporting unit not generating results of operations consistent with our expectations and previous forecasts. The decrease in the fair value of the Omnilink reporting unit was due to two customers' contracts which were not renewed during December 2016.

Historically, our revenues and expenses in the first quarter have been modestly affected by slowing of customer purchase activities during the holidays. As a result, historical quarterly fluctuations may not be indicative of future operating results.

As part of our effort to build and enhance our core business, we conduct ongoing business strategy reviews. During our review, we consider opportunities for growth in existing and new markets that may involve growth derived from both existing operations as well as from future acquisitions, if any. To the extent existing business lines and service offerings are not considered to be compatible with delivery of our core business services or with meeting our financial objectives, we may exit non-core lines of business or stop offering these services in part or in whole.

Results of Operations

The following table sets forth selected financial data from our consolidated statements of operations and comprehensive (loss) income for the periods presented along with percentage change between the periods (dollars in thousands):

	Years ended December 31,						2016 vs. 2015	2015 vs. 2014
	2016		2015		2014		% Change	% Change
Net revenues:								
Subscription and support revenues	$ 58,019	82.1%	$ 64,371	72.0%	$ 65,020	69.3%	-9.9%	-1.0%
Embedded devices and hardware	12,626	17.9%	$ 25,079	28.0%	28,849	30.7%	-49.7%	-13.1%
Total net revenues	70,645	100.0%	89,450	100.0%	93,869	100.0%	-21.0%	-4.7%
Cost of revenue								
Subscription and support revenues	22,986	32.5%	$ 25,410	28.4%	25,371	27.0%	-9.5%	0.2%
Embedded devices and hardware	13,004	18.4%	$ 22,981	25.7%	24,690	24.5%	-43.4%	-6.9%
Inventory reserves	541	0.8%	$ 1,343	1.5%	544	1.4%	-59.7%	146.9%
Impairment of other asset	-	0.0%	$ 1,275	1.4%	-	0.0%	(100.0)%	100.0%
Gross profit	34,114	48.3%	38,441	43.0%	43,264	47.1%	-11.3%	-11.1%
Operating expenses:								
Sales and marketing	13,318	18.9%	12,446	13.9%	11,876	12.7%	7.0%	4.8%
General and administrative	13,998	19.8%	15,798	17.7%	15,063	16.0%	-11.4%	4.9%
Engineering and development	9,224	13.1%	8,952	10.0%	8,009	8.5%	3.0%	11.8%
Depreciation and amortization	6,540	9.3%	7,116	8.0%	6,201	6.6%	-8.1%	14.8%
Impairment of goodwill and other intangible assets	12,005	17.0%	2,712	3.0%	-	0.0%	342.6%	100%
Restructuring charges	1,831	2.6%	-	0.0%	-	0.0%	100.0%	0.0%
Operating (loss) income	(22,802)	-32.3%	(8,583)	-9.6%	2,115	3.2%	165.7%	-505.8%
Interest expense	1,698	2.4%	806	0.9%	798	0.9%	110.7%	1.0%
Loss on extinguishment of debt	290	0.4%	-	0.0%	-	0.0%	100.0%	0.0%
Other income, net	(130)	-0.2%	(134)	-0.1%	(1,338)	-1.4%	-3.0%	-90.0%
(Loss) income from continuing operations, before income taxes	(24,660)	-34.9%	(9,255)	-10.3%	2,655	3.8%	166.4%	-448.6%
Income tax expense (benefit)	(340)	-0.5%	9,902	11.1%	419	0.4%	-103.4%	2263.2%
(Loss) income from continuing operations, net of income taxes	(24,320)	-34.4%	(19,157)	-21.4%	2,236	3.4%	27.0%	-956.8%
Loss from discontinued operations, net of income taxes	-	0.0%	-	0.0%	(492)	-0.5%	0.0%	-100.0%
Net (loss) income	$ (24,320)	-34.4%	$ (19,157)	-21.4%	$ 1,744	2.8%	27.0%	-1198.5%
Adjusted EBITDA [1]	$ 2,310	3.3%	$ 9,321	10.4%	$ 12,621	0.8%	-75.2%	-26.1%

(1) Adjusted EBITDA is not a financial measure prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). See further discussion, including reconciliation to the most comparable GAAP measure, under the caption Non-GAAP Financial Measures below.

Comparison of Fiscal Years Ended December 31, 2016 and December 31, 2015

During 2016, total revenue decreased $18.8 million, or 21.0%, to $70.6 million from $89.4 million in 2015. The decrease in revenue is primarily attributable to lower hardware sales which declined $12.5 million or 49.7% to $12.6 million from $25.1 million in 2015. This decline in hardware sales was primarily due to a strategic shift in how we sell our products and services. In the third quarter of 2015, we began to concentrate on selling higher margin, integrated managed service subscriptions that include the full suite, or subsets, of our devices, networks, applications and platform while moving away from the sale of individual components – especially hardware only.

Subscription and support revenues decreased $6.4 million, or 9.9%, to $58.0 million from $64.4 million in 2015. The decrease reflects losses associated with network customers' 2G conversions and pricing pressure on certain security product lines, which resulted in a lower price point. The decrease in revenue is also attributed to the shift to the integrated managed service subscription offerings.

Direct cost of subscription and support revenue for the years ended December 31, 2016 and 2015 decreased by $2.4 million or 9.5% to $23.0 million from $25.4 million in 2015. Subscription and support revenue less direct costs was $35.0 million, or 60.4% of subscription and support revenue for the year ended December 31, 2016 compared to $39.0 million, or 60.5% for the year ended December 31, 2015. In addition to lower direct costs associated with lost 2G conversions, we also had a larger proportional decrease in direct cost of subscription and support due in part to lower negotiated network and carrier costs and our strategic efforts to sell higher margin integrated managed services.

Direct cost of sales for embedded devices and hardware decreased $10.0 million, or 43.4% to $13.0 million for the year ended December 31, 2016 compared to $23.0 million for the year ended December 31, 2015. Embedded devices and hardware revenue less direct costs was ($0.4 million), or (3.0%) of embedded devices and hardware revenue for the year ended December 31, 2016 compared to $2.1 million, or 8.4% for the year ended December 31, 2015. The overall decrease in direct costs is due to lower corresponding revenues.

Inventory reserves decreased $0.8 million to $0.5 million as of December 31, 2016 compared to $1.3 million as of December 31, 2015. Inventory reserves have been presented separately within cost of sales due to a significant charge during the year ended December 31, 2015. As described in the Overview above, we entered into new and amended agreements with wireless carriers in September 2015. As a result of these agreements, we performed a lower of cost or market analysis leading to a significant increase in the inventory reserve of $1.3 million as of December 31, 2015 related to older, 2G cellular telecommunications devices and older satellite devices as well as an accrual for a purchase commitment related to raw materials for the older satellite devices that we will not fulfill. In addition, one of the amended carrier agreements led to settlement of a pre-existing relationship and a $1.3 million impairment of a prepaid expense during the year ended December 31, 2015. The prepaid expense was previously recorded in other assets.

Sales and marketing expense increased $0.9 million to $13.3 million for the year ended December 31, 2016 compared to $12.4 million for the same period in 2015. As a percentage of net revenues, sales and marketing expenses increased to 18.9% for the year ended December 31, 2016 compared to 13.9% for the year ended December 31, 2015. The increase is primarily attributable to hiring of sales and marketing personnel to promote our new integrated managed services model.

General and administrative expenses decreased $1.8 million to $14.0 million for the year ended December 31, 2016 compared to $15.8 million for the same period in 2015. The decrease includes a reduction of facility expenses of $0.6 million related to the relocation nof our corporate headquarters, as well as a $0.5 million reduction in salaries. The remaining decrease is primarily due to decreases in other professional fees.

Engineering and development expenses increased $0.3 million to $9.2 million for the year ended December 31, 2016 compared to $9.0 million for the same period in 2015. As a percentage of net revenues, engineering and development expenses increased to 13.0% for the year ended December 31, 2016 compared to 10.0% for the year ended December 31, 2015. The increase was primarily driven by the continued development associated with newly introduced product lines.

Depreciation and amortization expense decreased $0.6 million, or 8.1%, to $6.5 million for the year ended December 31, 2016 compared to $7.1 million for the same period in 2015.

The $12.0 million and $2.7 million impairments of goodwill and other intangible assets recorded for the year ended December 31, 2016 and 2015, respectively, were related to our Omnilink and DIY goodwill and trade names as described in the Overview above.

We recorded restructuring charges of $1.8 million, which includes $0.8 million related to facilities, $0.9 million in severance costs and $0.1 million related to scrap expense for inventory on a product line we will no longer continue to pursue. The restructuring charge for facilities of $0.8 million is comprised of $0.4 million for broker and other related fees and $0.4 million non-cash charge for the estimated August 1, 2016 net book value of furniture, fixtures and leasehold improvements, as well as moving costs. Our temporary new corporate headquarters office space, effective July 15, 2016, is under a one-year lease agreement.

Other income remained consistent at $0.1 million for the year ended December 31, 2016, and 2015, respectively.

We recorded a provision for income tax benefit of $0.3 million for the year ended December 31, 2016, $9.9 million in expense for the year ended December 31, 2015, and $0.4 million in expense for the year ended December 31, 2014. The effective tax rates were (1.4) %, 106.6% and 15.8% for the years ended December 31, 2016, 2015 and 2014, respectively. The effective tax rate for the year ended December 31, 2016 differed from the federal statutory rate of 34% primarily as a result of recording the valuation allowance for net deferred tax assets and the goodwill impairment recognized for the year ended December 31, 2016.

Comparison of Fiscal Years Ended December 31, 2015 and December 31, 2014

During 2015, total revenue decreased $4.4 million, or 4.7%, to $89.5 million from $93.9 million in 2014. The decrease in revenue is primarily attributable to lower hardware sales which declined $3.8 million or 13.1% to $25.1 million from $28.8 million in 2014. This decline in hardware sales was primarily due to a strategic shift in how we sell our products and services. In the third quarter of 2015, we began to concentrate on selling higher margin, integrated managed service subscriptions that include the full suite, or subsets, of our devices, networks, applications and platform while moving away from the sale of individual components – especially hardware only.

Subscription and support revenues decreased $0.6 million, or 1.0%, to $64.4 million from $65.0 million in 2014. The decrease is primarily attributable to declines in network only customers of $2.1 million. The decrease reflects losses associated with network customers' 2G conversions at a time when we did not have a competitive offer during the year until the fourth quarter of 2015. The decrease in revenue is also attributed to the shift to the integrated managed service subscription offerings. The declines in network only customers were partially offset by an increase in revenues of $1.5 million from our introduction of new product lines, including those recently acquired.

Direct cost of subscription and support revenue for the years ended December 31, 2015 and 2014 remained constant at $25.4 million. Subscription and support revenue less direct costs was $39.0 million, or 60.5% of subscription and support revenue for the year ended December 31, 2015 compared to $39.6 million, or 61.0% for the year ended December 31, 2014. The decreases are primarily due to a full year of Omnilink cost of subscription and support revenue, partially offset by lower costs due to the loss of revenue associated with 2G customers as described above and a modest reduction in carrier fees affecting just the fourth quarter of 2015.

Direct cost of revenue for embedded devices and hardware decreased $1.7 million, or 6.9% to $23.0 million for the year ended December 31, 2015 compared to $24.7 million for the year ended December 31, 2014. Embedded devices and hardware revenue less direct costs was $2.1 million, or 8.4% of embedded devices and hardware revenue for the year ended December 31, 2015 compared to $4.2 million, or 14.4% for the year ended December 31, 2014. The overall decrease in direct costs is due to lower corresponding revenues; however, the increase as a percentage of the corresponding revenue is due to a strategic shift in how we sell our products and services as is described above.

Expense for inventory reserves increased $0.8 million to $1.3 million for the year ended December 31, 2015 compared to $0.5 million for the same period in 2014. Inventory reserves are a separate caption in cost of revenue because of a significant charge during the year ended December 31, 2015. As described in the Overview above, we entered into new and amended agreements with wireless carriers in September 2015. As a result of these agreements, we performed a lower of cost or market analysis leading to a significant increase in the inventory reserve of $1.3 million during the year ended December 31, 2015 related to older, 2G cellular telecommunications devices and older satellite devices as well as an accrual for a purchase commitment related to raw materials for the older satellite devices that we will not fulfill. In addition, one of the amended carrier agreements led to settlement of a pre-existing relationship and a $1.3 million impairment of a prepaid expense during the year ended December 31, 2015. The prepaid expense was previously recorded in other assets.

Sales and marketing expense increased $0.5 million to $12.4 million for the year ended December 31, 2015 compared to $11.9 million for the same period in 2014. As a percentage of net revenues, sales and marketing expenses increased to 13.9% for the year ended December 31, 2015 compared to 12.7% for the year ended December 31, 2014. The increase is primarily attributable to hiring of sales and marketing personnel to promote our new integrated managed services model.

General and administrative expenses increased $0.7 million to $15.8 million for the year ended December 31, 2015 compared to $15.1 million for the same period in 2014. As a percentage of net revenues, general and administrative expenses increased to 17.7% for the year ended December 31, 2015 compared to 16.0% for the year ended December 31, 2014. The increase includes the effect of recently acquired product lines as well as $0.6 million for relocation and other executive recruiting costs. General and administrative expense for the year ended December 31, 2015 includes $0.4 million in other professional fees and transaction costs compared to $1.1 million for the comparable period in 2014.

Engineering and development expenses increased $1.0 million to $9.0 million for the year ended December 31, 2015 compared to $8.0 million for the same period in 2014. As a percentage of net revenues, engineering and development expenses increased to 10.0% for the year ended December 31, 2015 compared to 8.5% for the year ended December 31, 2014. The increase was primarily driven by the continued development associated with newly introduced product lines, with an increase in salaries of $0.8 million for newly hired employees as well as an increase of $0.2 million in contract labor. The increase also includes the effect of recently acquired product lines.

Depreciation and amortization expense increased $0.9 million, or 14.8%, to $7.1 million for the year ended December 31, 2015 compared to $6.2 million for the same period in 2014. The increase in depreciation and amortization expense is related to recently acquired product lines and development of new product and project initiatives, including the amortization of new intangible assets. The increase also includes $0.4 million for hardware used by a financially troubled customer at risk of not being returned to us.

The $2.7 million impairment of goodwill and other intangible assets recorded for the year ended December 31, 2015 was related to our DIY reporting unit and Omnilink trade names and technology as described in the Overview above.

Other income, net decreased $1.2 million for the year ended December 31, 2015 compared to 2014. The decrease is related to a pre-tax gain of $1.1 million on the sale of a cost method investment in a privately-held business during the year ended December 31, 2014. The carrying value of the investment was $0.2 million and was sold for $1.3 million.

We recorded a provision for income tax expense of $9.9 million for the year ended December 31, 2015 and $0.4 million for the year ended December 31, 2014. The effective tax rates were 106.6% and 15.8% for the year ended December 31, 2015 and 2014, respectively. The effective tax rate for the year ended December 31, 2015 differed from the federal statutory rate of 34% primarily as a result of recording the valuation allowance for net deferred tax assets.

Non-GAAP Financial Measures

Earnings before interest, taxes, depreciation and amortization expenses (EBITDA) and Adjusted EBITDA, which are presented below, are non-GAAP measures and do not purport to be alternatives to operating income as a measure of operating performance. We believe EBITDA, Adjusted EBITDA and Adjusted EBITDA per diluted share are useful to and used by investors and other users of the financial statements in evaluating our operating performance because it provides them with an additional tool to compare business performance across periods.

We believe that:

- EBITDA is widely used by investors to measure a company’s operating performance without regard to items such as interest, income tax, and depreciation and amortization expenses, which can vary substantially from company-to-company depending upon accounting methods and book value of assets, capital structure and the method by which assets were acquired; and
- Investors commonly adjust EBITDA information to eliminate the effect of equity-based compensation and other unusual or infrequently occurring items which vary widely from company-to-company and impair comparability.

We use EBITDA, Adjusted EBITDA and Adjusted EBITDA per diluted share:

- as a measure of operating performance to assist in comparing performance from period-to-period on a consistent basis
- as a measure for planning and forecasting overall expectations and for evaluating actual results against such expectations; and
- in communications with the board of directors, analysts and investors concerning our financial performance.

Although we believe, for the foregoing reasons, that the presentation of non-GAAP financial measures provides useful supplemental information to investors regarding our results of operations, the non-GAAP financial measures should only be considered in addition to, and not as a substitute for, or superior to, any measure of financial performance prepared in accordance with GAAP.

Use of non-GAAP financial measures is subject to inherent limitations because they do not include all the expenses that must be included under GAAP and because they involve the exercise of judgment of which charges should properly be excluded from the non-GAAP financial measure. Management accounts for these limitations by not relying exclusively on non-GAAP financial measures, but only using such information to supplement GAAP financial measures. The non-GAAP financial measures may not be the same non-GAAP measures, and may not be calculated in the same manner, as those used by other companies.

Adjusted EBITDA is calculated by excluding the effect of equity-based compensation and non-operational items from the calculation of EBITDA. Management believes that this measure provides additional relevant and useful information to investors and other users of our financial data in evaluating the effectiveness of our operations and underlying business trends in a manner that is consistent with management's evaluation of business performance.

We believe that excluding depreciation and amortization expenses of property, equipment and intangible assets to calculate EBITDA and Adjusted EBITDA provides supplemental information and an alternative presentation that is useful to investors' understanding of our core operating results and trends. Not only are depreciation and amortization expenses based on historical costs of assets that may have little bearing on present or future replacement costs, but also they are based on our estimates of remaining useful lives.

We believe that adding back the effects of equity-based compensation to arrive at Adjusted EBITDA provides supplemental information and an alternative presentation useful to investors' understanding of our core operating results and trends. Investors have indicated that they consider financial measures of our results of operations excluding equity-based compensation as important supplemental information useful to their understanding of our historical results and estimating our future results.

We also believe that, in excluding the effects of equity-based compensation, our non-GAAP financial measures provide investors with transparency into what management uses to measure and forecast our results of operations, to compare on a consistent basis our results of operations for the current period to that of prior periods and to compare our results of operations on a more consistent basis against that of other companies, in making financial and operating decisions and to establish certain management compensation.

Equity-based compensation is an important part of total compensation, especially from the perspective of employees. We believe, however, that supplementing GAAP income from continuing operations by providing income from continuing operations, excluding the effect of equity-based compensation in all periods, is useful to investors because it enables additional and period-to-period comparisons.

Adjusted EBITDA excludes non-cash and other charges including impairment charges, restructuring, an unusual reserve for inventory, executive severance and recruiting fees, costs related to an internal ERP systems integration upgrade, a network systems evaluation study and acquisition related costs. These are costs that we do not expect to recur on a regular basis, and consequently, we do not consider these charges as a component of ongoing operations for purposes of management's analysis of financial performance.

EBITDA and Adjusted EBITDA are not measures of liquidity calculated in accordance with GAAP, and should be viewed as a supplement to – not a substitute for – results of operations presented on the basis of GAAP. EBITDA and Adjusted EBITDA do not purport to represent cash flow provided by operating activities as defined by GAAP. Furthermore, EBITDA and Adjusted EBITDA are not necessarily comparable to similarly-titled measures reported by other companies.

The following table reconciles the specific items excluded from GAAP in the calculation of EBITDA and Adjusted EBITDA for the periods indicated below (in thousands, except per share amounts):

	Years Ended December 31,		
	2016	2015	2014
(Loss) income from continuing operations, net of income taxes (GAAP)	$ (24,320)	$ (19,157)	$ 2,236
Depreciation and amortization expense	7,958	8,217	6,812
Impairment of goodwill and other intangible assets	12,005	-	-
Interest expense and loss on extinguishment of debt, net	1,858	672	(540)
Income tax expense (benefit)	(340)	9,902	419
EBITDA (non-GAAP)	(2,840)	(366)	8,927
Equity-based compensation expense	2,725	2,673	2,565
Non-cash and other items	2,425	7,014	1,129
Adjusted EBITDA (non-GAAP)	$ 2,310	$ 9,321	$ 12,621
(Loss) income from continuing operations, net of income taxes, per diluted share (GAAP)	$ (1.25)	$ (1.00)	$ 0.12
Weighted average shares outstanding used in computing diluted per share amounts	19,493	19,117	19,268

As noted above, non-cash and other items include impairment charges, an unusual reserve for inventory, restructuring charges, executive severance and recruiting fees, costs and acquisition related costs.

Consolidated Financial Condition (in thousands)

	Years Ended December 31,		
	2016	2015	2014
Cash flow provided by (used in) continuing operations			
Operating activities	$ (492)	$ 8,877	$ 10,456
Investing activities	(3,322)	(5,300)	(41,424)
Financing activities	(3,138)	(4,610)	22,493
Cash flow from discontinued operations	-	-	142
Decrease in cash and cash equivalents	$ (6,952)	$ (1,033)	$ (8,333)

We use the net cash generated from our operations to fund new product development, upgrades to our technology and to invest in new businesses. We believe that our sources of funds, principally from operations and, to the extent necessary, from external financing arrangements, are sufficient to meet ongoing operations and investing requirements.

The cash portion of the purchase consideration for the 2014 acquisition was funded, in part, through third party indebtedness. We expect our normal capital spending requirements will continue to be financed primarily through internally generated funds.

Our cash and cash equivalents are held mostly in domestic accounts and, accordingly, we do not have material exposure to foreign currency fluctuations.

Net cash provided by discontinued operations for the year ended December 31, 2014 was $0.1 million. Cash flows associated with the revenue-producing and cost-generating activities of the discontinued operations were eliminated following their disposal.

Operating Cash Flows

Net cash used by operating activities in 2016 decreased by $9.4 million compared to net cash provided by operating activities in 2015, primarily due to lower earnings, offset by the effect of non-cash expenses, such as goodwill and other asset impairments of $12.0 million, and a year over year increase in accounts receivable, financing receivables and inventory.

Net cash provided by operating activities in 2015 decreased by $1.6 million compared to 2014, primarily due to lower earnings offset by the effect of non-cash expenses and a year over year reduction in accounts receivable.

Investing and Financing Cash Flows

In 2016, our cash flows used in investing activities was $3.3 million for the acquisition of property and equipment, capitalized internally developed software and the acquisition of software, which was a decrease of $2.0 million compared to these captions in 2015. Our cash flows used in financing activities relate primarily to our refinancing of our loan agreement. See Note M – Debt.

In 2015, our cash flows used in investing activities was $5.3 million for the acquisition of property and equipment, capitalized internally developed software and the acquisition of software, which was a decrease of $0.1 million compared to these captions in 2014. Our cash flows used in financing activities related primarily to principal payments on our loan with Silicon Valley Bank (SVB).

In 2014, we invested $41.4 million primarily comprised of $37.3 million net cash used to acquire Omnilink through a merger transaction, $2.2 million to purchase property and equipment, and $3.2 million to purchase other intangible assets, primarily development costs for software. The cash paid for these investments was primarily funded from third party (SVB) bank loan indebtedness ($25.0 million). The balance of the cash needed to complete the purchase price consideration was funded from the proceeds from the 2013 underwritten offering and by cash generated by operations. These investment outflows were partially offset by proceeds from the sale on an investment which generated $1.3 million. Our cash flows provided by financing activities relate primarily to proceeds from our loan with SVB of $25.0 million, offset by $2.5 million of principal payments.

Liquidity and Capital Resources

We had working capital of $8.6 million as of December 31, 2016, compared to $17.6 million as of December 31, 2015. We had cash balances of $9.5 million and $16.2 million as of December 31, 2016 and 2015. In 2014, we invested $37.3 million for a business merger transaction as well as investing $5.4 million in capital expenditures to further benefit the Company. The Company does not have any additional borrowing capacity under its loan agreement with Crystal.

Contractual Obligations

The table below sets forth our contractual obligations at December 31, 2016. Additional details regarding these obligations are provided in the accompanying notes to our consolidated financial statements (in thousands).

	Payments due by period				
	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Term loan [1]	$ 17,000	$ 1,275	$ 5,100	$ 10,625	$ -
Operating lease obligations [2]	7,709	1,785	2,722	2,332	870
Purchase commitments [3]	5,088	5,088	-	-	-
Total [4]	$ 29,797	$ 8,148	$ 7,823	$ 12,958	$ 870

(1) Amounts represent future principal payments under the Crystal Financial LLC Loan Agreement. See Note M – Debt and Note V – Subsequent Events in the accompanying consolidated financial statements.

(2) Amounts represent future minimum rental payments under non-cancelable operating leases for our facilities.

(3) Amounts represent future obligations to purchase inventory.

(4) Liabilities of less than $0.1 million related to Accounting Standards Codification Subtopic 740-10, Income Taxes have not been included in the table above because we are uncertain as to if or when such amounts may be settled. See Note K – Income Taxes in the accompanying consolidated financial statements.

Off-Balance Sheet Arrangements

As of December 31, 2016, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. On an ongoing basis, management evaluates its estimates and judgments, including those related to revenue recognition, the allowance for uncollectible accounts receivable, reserves for excess and obsolete inventories, capitalized internally developed software, goodwill and long-lived assets and income taxes.

Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

We have identified the policies below as critical to our business and the understanding of our results of operations. See Note A – Summary of Significant Accounting Policies in the accompanying consolidated financial statements for a detailed discussion on the application of these and other accounting policies.

Revenue Recognition

Our revenue is generated from two primary sources, subscription fees and the sale of IoT devices and hardware. Revenue is recognized when persuasive evidence of an agreement exists, the hardware or service has been delivered, fees and prices are fixed and determinable, collection is reasonably assured and all other significant obligations have been fulfilled. Revenue is recognized net of sales and any transactional taxes.

Subscription fees are based on the number of devices (subscriptions) on our integrated IoT horizontal platform network. Subscription fees are typically invoiced and recognized as revenue as we provide the services or process transactions in accordance with contractual performance standards. Customer contracts are generally recurring or multi-year agreements. Subscription fee revenues for managed service arrangements include all of the key IoT components – device, network, application and platform. Subscription fees also include volume-based excess message, network usage and other activity that are recognized as revenue as incurred, consistent with contractual terms. We may, under an appropriate agreement, bill subscription fees in advance for the network service to be provided. In these instances, we recognize the advance charge (even if nonrefundable) as deferred revenue and recognize the revenue over future periods in accordance with the contract term as the network service (time, data or minutes) is provided, delivered or performed. Subscription revenue may also include set-up fees which are typically deferred and recognized ratably over the estimated life of the subscription. Direct and incremental costs associated with deferred revenue are deferred, classified as deferred costs in prepaid expense and other assets in our consolidated balance sheets and recognized in the period revenue is recognized. For managed services, cost of embedded devices and hardware are capitalized as fixed assets and depreciated over the estimated life of the hardware. Unbilled revenue consists of earned but unbilled revenue that results from non-calendar month billing cycles and the one-month lag time in billing related to certain of our services.

We recognize revenue from the sale of IoT devices and hardware at the time of shipment and passage of title. Provisions for rebates, promotions, product returns and discounts to customers are recorded as a reduction in revenue in the same period that the revenue is recognized. We offer customers the right to return hardware that does not function properly within thirty to ninety days after delivery. We continuously monitor and track such hardware returns and record a provision for the estimated amount of such future returns based on historical experience and any notification received of pending returns. While such returns have historically been within expectations and the provisions established, we cannot guarantee that we will continue to experience the same return rates that we have experienced in the past. Any significant increase in hardware failure rates and the resulting credit returns could have a material adverse impact on operating results for the period or periods in which such returns materialize. Shipping and handling fees received from customers is recorded with embedded device and hardware revenue and associated costs are recorded in cost of embedded hardware and devices.

On occasion we sell both hardware and monthly recurring services to the same customer. In such cases, we evaluate such arrangements to determine whether a multiple-element arrangement exists. For multiple-element revenue arrangements we allocate arrangement consideration at the inception of an arrangement to all deliverables using the relative selling price method. The hierarchy for determining the selling price of a deliverable includes (a) vendor-specific objective evidence, if available, (b) third-party evidence, if vendor-specific objective evidence is not available and (c) best estimated selling price, if neither vendor-specific nor third-party evidence is available. In most cases, we utilize best estimated selling price, as vendor specific objective evidence and third party evidence are not available. Certain judgments and estimates are made and used to determine revenue recognized in any accounting period. If estimates are revised, material differences may result in the amount and timing of revenues recognized for a given period.

Allowance for Uncollectible Accounts Receivable

We maintain an allowance for estimated losses resulting from the inability of our customers to make required payments. The allowance for uncollectible accounts is based principally upon specifically identified amounts where collection is deemed doubtful. Additional non-specific allowances are recorded based on historical experience and our assessment of a variety of factors related to the general financial condition and business prospects of our customer base. Significant management judgments and estimates must be made and used in connection with establishing the allowance for uncollectible accounts receivable in any accounting period. Changes in economic conditions could significantly affect our collection efforts and results of operations, particularly in the form of bad debts on the part of our customers.

Inventory and Reserves for Excess, Slow-Moving and Obsolete Inventory

We value our inventory at the lower of first-in, first-out (FIFO) cost or market. We continually evaluate the composition of our inventory and estimate potential future excess, obsolete and slow-moving inventory. We specifically identify obsolete hardware for reserve purposes and analyze historical usage, forecasted production based on demand forecasts, current economic trends, and historical write-offs when evaluating the adequacy of the reserve for excess and slow-moving inventory. Significant management judgments and estimates must be made and used in connection with establishing inventory reserves in any accounting period. The establishment of a reserve for obsolete or slow moving inventory establishes a new cost basis in the inventory. If we are not able to achieve our expectations of the net realizable value of the inventory at its current carrying value, we adjust our reserves accordingly.

Equity-Based Compensation

Compensation includes equity-based awards recorded and recognized using fair value. Recognition of expense is net of an estimated forfeiture rate, recognizing compensation costs for only those awards expected to vest over the requisite service period of the awards. Determining fair value requires estimates and involves use of subjective assumptions; including assumptions on stock price volatility. Stock price volatility estimates are based primarily on historical volatility over comparable periods.

Capitalized Software

We capitalize software both for internal use and for inclusion in our products. For internal use software, costs incurred in the preliminary project stage of developing or acquiring internal use software are expensed as incurred. After the preliminary project stage is completed, management has approved the project and it is probable that the project will be completed and the software will be used for its intended purpose, we capitalize certain internal and external costs incurred to acquire or create internal use software, principally related to software coding, designing system interfaces and installation and testing of the software. We amortize capitalized internal use software costs using the straight-line method over the estimated useful life of the software, generally for three years.

For software embedded in our products, we capitalize software development costs when project technological feasibility is established and conclude capitalization when the hardware is ready for release. We amortize capitalized costs for software to be sold using the straight-line method over the estimated useful life based on anticipated revenue streams of the software, generally from three to seven years. Software development costs incurred prior to the establishment of technological feasibility are expensed as incurred as engineering and development.

Judgment is required in determining which software projects are capitalized and the resulting economic life.

Goodwill and Long-Lived Assets

We evaluate goodwill and long-lived assets for potential impairment indicators whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that management considers important which could result in an evaluation for impairment include but are not limited to the following:

- significant underperformance relative to historical or projected future operating results or cash flows;
- significant changes in the manner of or use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period;
- a decline in our market capitalization below net book value; and
- changes in our organization or management reporting structure that could result in additional reporting units, which may require alternative methods of estimating fair values or greater disaggregation or aggregation in our analysis by reporting unit.

Goodwill and trade names are not amortized, but are subject to an annual impairment assessment performed at the reporting unit level. Goodwill and trade names must be assessed more frequently if indicators of impairment are identified. An impairment charge will be recognized only when the implied fair value of a reporting unit's goodwill or the trade name(s) is less than its carrying amount. We assess goodwill (and trade names as applicable) annually for our reporting units, all of which are components of our single reportable operating segment. We elected to change our annual goodwill impairment testing measurement date from October 1 to December 1 effective October 1, 2016, primarily to better align our measurement date with our financial projections, as well as our annual strategic, financial planning, and budgeting processes. There was no impact of the change in measurement date.

In the second quarter of 2016, management evaluated and determined that the Omnilink and Do-It-Yourself (DIY) product lines and reporting units should be tested for impairment as a result of lower than expected operating results, which are related to strategic changes and delays associated with the launch of a new personal tracking product line. Management initiated a quantitative two-step goodwill impairment test by comparing the carrying value of the net assets of the respective reporting units to its fair value based on a discounted cash flow analysis. Based on our Step 2 valuation assessment, we determined that the fair values of the goodwill in these reporting units were less than the respective carrying values, and we recorded $4.2 million in impairment charges as of June 30, 2016.

As part of our annual assessment of goodwill at December 1, 2016, we found that the carrying values of our Omnilink and DIY reporting units were greater than the calculated fair values. Accordingly, we performed a Step 2 analysis for these reporting units and recorded goodwill impairment of $7.4 million for our Omnilink reporting unit. No impairment was recorded for DIY goodwill as no impairment was indicated in the Step 2 analysis. As part of our December 1, 2016 assessment we also recorded $0.4 million of impairment related to the Omnilink Trade Name. The decrease in the fair value of the DIY reporting unit was principally due to the reporting unit not generating results of operations consistent with our expectations and previous forecasts. The Omnilink impairment was due to two contracts not being renewed during December 2016.

Our annual assessment of goodwill includes comparing the fair value of each reporting unit to the carrying value, referred to as Step One. We estimate fair value principally using discounted cash flow models and compare the aggregate fair value of the reporting units to the respective carrying values. If the fair value of a reporting unit exceeds its carrying value, goodwill is not impaired and no further testing is necessary. If the carrying value of a reporting unit exceeds its fair value, we perform a second test, referred to as Step Two, to measure the amount of impairment to goodwill, if any. To measure the amount of any impairment, we determine the implied fair value of goodwill in the same manner as if we were acquiring the affected reporting unit in a business combination. Specifically, we allocate the fair value of the affected reporting unit to all of the assets and liabilities of that unit, including any unrecognized intangible assets, in a hypothetical calculation that would yield the implied fair value of goodwill. If the implied fair value of goodwill is less than the goodwill recorded on our consolidated balance sheet, we record an impairment charge for the difference.

Our assumptions, inputs and judgments used in performing the valuation analysis are inherently subjective and reflect estimates based on known facts and circumstances at the time we perform the valuations. These estimates and assumptions primarily include, but are not limited to, projected results of operations and cash flows, discount rates, terminal growth rates, and capital expenditures forecasts. The use of different assumptions, inputs and judgments, or changes in circumstances, could materially affect the results of the valuation. Due to the inherent uncertainty involved in making these estimates, actual results could differ from our estimates and could result in additional non-cash impairment charges in the future. We considered the effect of a 1% decrease in growth rate coupled with a 1% increase in the discount rate for each of our four reporting units. This hypothetical change would cause the indicated fair value for the Omnilink reporting unit to decrease by $3.5 million. However, we concluded that our estimated value is appropriate and consistent with our overall valuation and that goodwill and other intangible assets are not further impaired. The hypothetical change did not affect the results for our other two reporting units.

Other intangible assets, including patents, acquired intellectual property and customer relationships, have finite lives and we record these assets at cost less accumulated amortization. We calculate amortization expense on a straight-line basis over the estimated economic useful life of the assets, which are 7 to 16 years for patents and acquired intellectual property and on a staight line basis, which approximates the pattern over which the economic benefits are being utilized, which is 4 to 11 years for customer relationships. We assess other intangible assets and long-lived assets for impairment on a quarterly basis whenever any events have occurred or circumstances have changed that would indicate impairment could exist. Any assessment for impairment is based on estimated future cash flows directly associated with the asset or asset group.

Income Taxes

Estimates and judgments are required in the calculation of certain tax liabilities and in the determination of the recoverability of certain deferred tax assets arising from net operating losses, tax credit carryforwards and temporary differences between the tax and financial statement recognition of revenue and expense. Significant changes to these estimates may result in an increase or decrease to our tax provision in a subsequent period.

Deferred tax assets are required to be reduced by a valuation allowance, if based on the weight of available evidence; it is more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. In evaluating the ability to recover the deferred tax assets, in full or in part, we consider all available positive and negative evidence including past operating results, the existence of cumulative losses in the most recent years and the forecast of future taxable income on a jurisdiction by jurisdiction basis. In determining future taxable income, we consider assumptions for the amount of state, federal and international pre-tax operating income, the reversal of temporary differences and the implementation of feasible and prudent tax planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we use to manage the underlying businesses. Actual operating results and the underlying amount and category of income in future years could differ materially from our current assumptions, judgments and estimates of recoverable net deferred tax assets.

In 2016, we continued to maintain our full valuation allowance on our deferred tax assets, as we have determined that we would not meet the criteria of "more likely than not" that our federal and state net operating losses and certain other deferred tax assets would be recoverable. This determination was based on our cumulative loss over the past three years. During 2015, we determined that we would not meet the criteria of "more likely than not" that the cumulative federal net operating losses and certain other deferred tax assets would be recoverable. This determination was based on our assessment of both positive and negative evidence regarding realization of our deferred tax assets; in particular, the strong negative evidence associated with our cumulative loss over the past three years. Accordingly, we recorded a valuation allowance against these items. The deferred tax assets consist of federal net operating losses, state net operating losses, tax credits, and other deferred tax assets, most of which expire between 2015 and 2035. As a result of recording the valuation allowance, we recognized deferred tax expense of $9.9 million for the year ended December 31, 2015. Income tax expense recorded in the future will be reduced or increased to the extent of offsetting decreases or increases to the valuation allowance.

In the normal course of business, we are subject to inquiries and routine income tax audits from U.S. and non-U.S. tax authorities with respect to income taxes which may result in adjustments to the timing or amount of taxable income or deductions or the allocation of income among tax jurisdictions. Further, during the ordinary course of business, other facts and circumstances may impact our ability to utilize tax benefits and could also impact estimated income taxes to be paid in future periods. We believe we have appropriately accrued for tax exposures. If we are required to pay an amount less than or exceeding our tax provisions for uncertain tax matters, the financial impact will be reflected in the period in which the matter is resolved or identified. In the event that actual results differ from these estimates, we may need to adjust tax accounts which could materially impact our financial condition and results of operations.

Recent Accounting Pronouncements

For information with respect to new accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note A – Summary of Significant Accounting Policies in the accompanying consolidated financial statements.

Effect of Inflation

Inflation has not been a material factor affecting our business. In recent years the cost of electronic components has remained relatively stable, due to competitive pressures within the industry, which has enabled us to contain our hardware costs. Our general operating expenses, such as salaries, employee benefits, and facilities costs are subject to normal inflationary pressures, but to date inflation has not had a material effect on our operating results.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

The market risk in our financial instruments represents the potential loss arising from adverse changes in financial rates. We are exposed to market risk in the area of interest rates. These exposures are directly related to our normal funding and investing activities.

We also hold cash balances in accounts with commercial banks in the United States and foreign countries. These cash balances represent operating balances only and are invested in short-term time deposits of the local bank. Such operating cash balances held at banks outside the United States are denominated in the local currency. We held $0.3 million and $0.5 million in foreign bank accounts at December 31, 2016 and 2015, respectively.

Foreign Currency

The assets and liabilities of our foreign operations are translated into U.S. dollars at current exchange rates, and revenues and expenses are translated at the ending exchange rate from the prior period which materially approximates the average exchange rates for each period. Resulting translation adjustments are reflected as other comprehensive loss in the consolidated statements of operations and comprehensive (loss) income and within shareholders' equity. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are included in the results of operations as incurred. Except for transactions with customers and vendors in Canada, substantially all other transactions are denominated in U.S. dollars. Foreign operations were not significant to us for the fiscal year ended December 31, 2016.

Interest Rate Risk

We are exposed to changes in interest rates on our revolving line of credit, long term debt and current portion of our long term debt that carry floating rate interest and which represented 98% of our debt as of December 31, 2016. The impact of a 100 basis point change in interest rates would result in a change in annual interest expense of $0.2 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

NUMEREX CORP. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands)

	As of December 31,	
	2016	**2015**
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 9,285	$ 16,237
Restricted cash	221	-
Accounts receivable, less allowance for doubtful accounts of $767 and $618	9,436	9,237
Financing receivables, current	1,778	1,780
Inventory, net of reserves	9,011	7,617
Prepaid expenses and other current assets	1,421	1,887
Deferred tax assets	-	603
TOTAL CURRENT ASSETS	31,152	37,361
Financing receivables, less current portion	2,227	2,330
Property and equipment, net of accumulated depreciation and amortization	6,022	4,795
Software, net of accumulated amortization	6,530	7,146
Other intangible assets, net of accumulated amortization	11,519	15,722
Goodwill	33,554	43,424
Other assets	474	409
TOTAL ASSETS	$ 91,478	$ 111,187
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 15,894	$ 11,390
Accrued expenses and other current liabilities	3,209	2,864
Deferred revenues	1,882	1,942
Current portion of long-term debt	1,275	3,600
Current portion of capital lease	291	-
TOTAL CURRENT LIABILITIES	22,551	19,796
Long-term debt, less current portion, net of deferred financing costs	14,885	15,309
Capital lease, less current portion	797	-
Deferred tax liabilities	468	1,595
Other liabilities	1,512	1,891
TOTAL LIABILITIES	40,213	38,591
COMMITMENTS AND CONTINGENCIES (NOTE N)		
SHAREHOLDERS' EQUITY		
Preferred stock, no par value; 3,000 authorized; none issued	-	-
Class A common stock, no par value; 30,000 authorized; 20,935 and 20,652 issued; 19,608 and 19,177 outstanding	-	-
Class B common stock, no par value; 5,000 authorized; none issued	-	-
Additional paid-in capital	105,112	102,108
Treasury stock, at cost; 1,327 and 1,316 shares	(5,466)	(5,444)
Accumulated other comprehensive loss	(110)	(117)
Accumulated deficit	(48,271)	(23,951)
TOTAL SHAREHOLDERS' EQUITY	51,265	72,596
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 91,478	$ 111,187

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

NUMEREX CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
AND COMPREHENSIVE (LOSS) INCOME
(In thousands, except per share data)

	Years Ended December 31,		
	2016	**2015**	**2014**
Net revenues:			
Subscription and support revenues	$ 58,019	$ 64,371	$ 65,020
Embedded devices and hardware	12,626	25,079	28,849
Total net revenues	70,645	89,450	93,869
Cost of sales			
Subscription and support revenues	22,986	25,410	25,371
Embedded devices and hardware	13,004	22,981	24,690
Inventory reserves	541	1,343	544
Impairment of other asset	-	1,275	-
Gross profit	34,114	38,441	43,264
Operating expenses:			
Sales and marketing	13,318	12,446	11,876
General and administrative	13,998	15,798	15,063
Engineering and development	9,224	8,952	8,009
Depreciation and amortization	6,540	7,116	6,201
Impairment of goodwill and other intangible assets	12,005	2,712	-
Restructuring charges	1,831	-	-
Operating (loss) income	(22,802)	(8,583)	2,115
Interest expense	1,698	806	798
Loss on extinguishment of debt	290	-	-
Other income, net	(130)	(134)	(1,338)
(Loss) income from continuing operations before income taxes	(24,660)	(9,255)	2,655
Income tax expense (benefit)	(340)	9,902	419
(Loss) income from continuing operations, net of income taxes	(24,320)	(19,157)	2,236
Loss from discontinued operations, net of income taxes	-	-	(492)
Net (loss) income	(24,320)	(19,157)	1,744
Other items of comprehensive (loss) income, net of income taxes:			
Foreign currency translation adjustment	7	(69)	(24)
Comprehensive (loss) income	$ (24,313)	$ (19,226)	$ 1,720
Basic (loss) earnings per share:			
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12
Loss from discontinued operations	-	-	(0.03)
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09
Diluted (loss) earnings per share:			
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12
Loss from discontinued operations	-	-	(0.03)
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09
Weighted average shares outstanding used in computing earnings per share:			
Basic	19,493	19,117	18,922
Diluted	19,493	19,117	19,268

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

NUMEREX CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands)

	Common Shares	Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Shareholders' Equity
Balance at January 1, 2014	20,069	95,777	(5,238)	(24)	(6,538)	83,977
Equity-based compensation expense	1	2,565	-	-	-	2,565
Equity-based compensation plan activity	214	867	-	-	-	867
Value of shares retained to pay employee taxes	-	(153)	(114)	-	-	(267)
Translation adjustment	-	-	-	(24)	-	(24)
Net income	-	-	-	-	1,744	1,744
Balance at December 31, 2014	20,284	99,056	(5,352)	(48)	(4,794)	88,862
Equity-based compensation expense	-	2,673	-	-	-	2,673
Equity-based compensation plan activity	326	283	-	-	-	283
Value of shares retained to pay employee taxes	-	(219)	(92)	-	-	(311)
Issuance of shares in asset acquisition	30	243	-	-	-	243
Other	12	72	-	-	-	72
Translation adjustment	-	-	-	(69)	-	(69)
Net loss	-	-	-	-	(19,157)	(19,157)
Balance at December 31, 2015	20,652	102,108	(5,444)	(117)	(23,951)	72,596
Equity-based compensation expense	-	2,725	-	-	-	2,725
Equity-based compensation plan activity	282	509	-	-	-	509
Issuance of common shares for services	1	8	-	-	-	8
Value of shares retained to pay employee taxes	-	(238)	(22)	-	-	(260)
Translation adjustment	-	-	-	7	-	7
Net loss	-	-	-	-	(24,320)	(24,320)
Balance at December 31, 2016	20,935	$ 105,112	$ (5,466)	$ (110)	$ (48,271)	$ 51,265

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

NUMEREX CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2016	**2015**	**2014**
Cash flows from operating activities:			
Net (loss) income	$ (24,320)	$ (19,157)	$ 1,744
Less loss from discontinued operations, net of income taxes	-	-	(492)
(Loss) income from continuing operations, net of income taxes	(24,320)	(19,157)	2,236
Adjustments to reconcile net (loss) income from continuing operations to net cash (used in) provided by operating activities:			
Depreciation and amortization	7,958	8,217	6,812
Impairment of goodwill, other intangible assets and other asset	12,005	3,987	-
Non-cash restructuring charges	400	-	-
Equity-based compensation expense	2,725	2,673	2,565
Loss on extinguishment of debt	290	-	-
Deferred income taxes	(524)	9,956	365
Bad debt expense	434	562	392
Inventory reserves	541	1,343	544
Gain on sale of cost method investment	-	-	(1,109)
Other non-cash expense	206	128	98
Changes in assets and liabilities, net of effects of acquisitions:			
Accounts and financing receivables	(530)	3,162	(1,034)
Inventory	(4,612)	(1,929)	233
Accounts payable	4,723	(818)	665
Deferred revenue	(333)	264	154
Other	545	489	(1,465)
Net cash (used in) provided by operating activities	(492)	8,877	10,456
Cash flows from investing activities:			
Net cash paid for acquisition	-	-	(37,287)
Purchases of property and equipment	(874)	(1,150)	(2,209)
Capitalized software development and purchases of software	(2,448)	(4,150)	(3,237)
Proceeds from sale of cost basis investment	-	-	1,309
Net cash used in investing activities	(3,322)	(5,300)	(41,424)
Cash flows from financing activities:			
Principal payments on debt	(19,349)	(4,252)	(2,508)
Principal payments on capital lease obligations	-	(148)	(306)
Proceeds from long-term debt	17,000	-	25,000
Equity-based compensation plan activity, net	509	283	867
Payment of taxes on equity-based awards	(260)	(311)	(267)
Deferred financing costs paid	(1,038)	(182)	(293)
Net cash (used in), provided by financing activities	(3,138)	(4,610)	22,493
Net cash provided by discontinued operations	-	-	142
Net decrease in cash and cash equivalents	(6,952)	(1,033)	(8,333)
Cash and cash equivalents at beginning of period	16,237	17,270	25,603
Cash and cash equivalents at end of period	$ 9,285	$ 16,237	$ 17,270

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

NUMEREX CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS - CONTINUED
(In thousands)

	Years Ended December 31,		
	2016	2015	2014
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 1,456	$ 673	$ 703
Cash paid for income taxes	31	58	146
Disclosure of non-cash investing and financing activities:			
Capital expenditures in accounts payable	222	441	417
Non-cash interest	532	142	-
Non-monetary consideration for acquisition of assets	-	375	-
Common stock issued for acquisition of assets	-	243	-
Issuance of shares for services	8	-	-

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

NOTE A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

Numerex Corp. (NASDAQ: NMRX) is a holding company incorporated in Pennsylvania and, through its subsidiaries, is a single source, leading provider of managed enterprise solutions enabling the Internet of Things (IoT). An IoT solution is generally viewed as a combination of devices, software and services that operate with little or no human interaction. Our managed IoT solutions are simple, innovative, scalable and secure. Our solutions incorporate each of the four key IoT building blocks – Device, Network, Application and Platform. We provide our technology and service solutions through our integrated IoT horizontal platforms, which are generally sold on a subscription basis.

Basis of Presentation

The consolidated financial statements include the results of operations and financial position of Numerex and its wholly owned subsidiaries in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). Intercompany accounts and transactions have been eliminated in consolidation.

Discontinued Operations

Businesses to be divested are classified in the consolidated financial statements as either discontinued operations or held for sale. For businesses classified as discontinued operations, the balance sheet amounts and results of operations are reclassified from their historical presentation to assets and liabilities of discontinued operations on the consolidated balance sheet and to discontinued operations on the consolidated statements of operations and comprehensive (loss) income and cash flows, respectively, for all periods presented. The gains or losses associated with these divested businesses are also recorded in discontinued operations in the consolidated statements of operations and comprehensive (loss) income. Additionally, the accompanying notes do not include the operating results of businesses classified as discontinued operations for all periods presented. As of June 30, 2014, we completed the divestiture of the businesses classified as discontinued operations. We have not had and do not expect to have any significant continuing involvement with these businesses following their divestiture. See Note C – Discontinued Operations for more information.

Estimates and Assumptions

The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expense and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, warranty costs, doubtful accounts, goodwill and intangible assets, expenses, accruals, equity-based compensation, income taxes, restructuring charges, leases, long-term service contracts, contingencies and litigation. 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 that are not readily apparent from other sources. Actual results may differ materially from these estimates.

Fair Value of Financial Instruments

The fair value of financial instruments classified as current assets or liabilities, including cash and cash equivalents, accounts receivable, and accounts payable and accrued expenses approximate carrying value, principally because of the short-term, maturity of those items. The fair value of our long-term financing receivables and note payable approximates carrying value based on their effective interest rates compared to current market rates and similar type borrowing arrangements.

We measure and report certain financial assets and liabilities at fair value on a recurring basis, including cash equivalents. The major categories of nonfinancial assets and liabilities that we measure at fair value include reporting units measured at fair value in our goodwill impairment test as well as certain indefinite lived intangible assets. See Note D – Fair Value Measurements for more information.

Concentration of Credit Risk

Financial instruments that potentially subject us to a concentration of credit risk are primarily cash investments and accounts and financing receivables. We maintain our cash and overnight investment balances in financial institutions, which typically exceed federally insured limits. We had cash balances in excess of these limits of $9.3 million and $16.0 million at December 31, 2016 and 2015, respectively. We have not experienced any losses in such accounts and believe we are not exposed to any significant credit risk on cash and cash equivalents. Concentration of credit risk with respect to accounts and financing receivables from customers is limited. We perform credit evaluations of prospective customers and we evaluate our trade and financing receivables periodically. Our accounts and financing receivables are at risk to the extent that we may not be able to collect from some of our customers. See Note E – Accounts Receivable, Note F – Financing Receivables and Note Q – Significant Customer, Concentration of Risk and Related Parties for more information.

Cash and Cash Equivalents

We consider all investments with an original maturity of three months or less at date of purchase to be cash equivalents. Cash equivalents consist of overnight repurchase agreements and amounts on deposit in foreign banks. We held $0.3 million and $0.5 million in foreign bank accounts at December 31, 2016 and 2015, respectively.

Restricted Cash

As of December 31, 2016, cash of $0.2 million was held in escrow related to certain vendor obligations as a result of entering into our loan agreement in March 2016. See Note M – Debt. There was no restricted cash at December 31, 2015.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are stated at gross invoiced amounts less discounts, other allowances and provision for uncollectible accounts. Trade accounts receivable include earned but unbilled revenue that results from non-calendar month billing cycles and lag time in billing related to certain of our services. Credit is extended to customers based on an evaluation of a customer's financial condition and, generally, collateral is not required. Accounts receivable are generally due within 30-90 days. We maintain an allowance for estimated losses resulting from the inability of our customers to make required payments. The allowance for doubtful accounts is based principally upon specifically identified amounts where collection is deemed doubtful. Additional non-specific allowances are recorded based on historical experience and our assessment of a variety of factors related to the general financial condition and business prospects of our customer base. We review the collectability of individual accounts and assess the adequacy of the allowance for doubtful accounts quarterly. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. See Note E – Accounts Receivable for more information.

Financing Receivables

Financing receivables are due in installments. We evaluate the credit quality of our financing receivables on an ongoing basis utilizing an aging of the accounts and write-offs, customer collection experience, the customer's financial condition, known risk characteristics impacting the respective customer base, and other available economic conditions, to determine the appropriate allowance. Similar to accounts receivable, we typically do not require collateral. All amounts due at December 31, 2016 and 2015 were deemed fully collectible and an allowance was not necessary. See Note F – Financing Receivables for more information.

Inventories and Reserves for Excess, Slow-Moving and Obsolete Inventory

Inventories are valued at the lower of cost or market and consist principally of (1) security devices and (2) cellular IoT Modems and Modules and (3) satellite IoT Modems and other accessories. Cost is determined on the first-in, first-out (FIFO) basis. Inbound freight costs, including raw material freight costs to contract manufacturers is recorded in inventory and these costs are recognized in cost of sales when the product is sold. Lower of cost or market value of inventory is determined at the product level and evaluated quarterly. Estimated reserves for obsolescence or slow moving inventory are maintained based on current economic conditions, historical sales quantities and patterns and, in some cases, the specific risk of loss on specifically identified inventories. Such inventories are recorded at estimated realizable value net of the costs of disposal. The establishment of a reserve for obsolete or slow moving inventory establishes a new cost basis in the inventory. See Note G – Inventory for more information.

Property and Equipment

Property and equipment are carried at cost, net of accumulated depreciation and amortization. Depreciation is provided in amounts sufficient to relate the cost of depreciable assets to operations over their estimated service lives. Property and equipment under capital leases are amortized over the lives of the respective leases or over the service lives of the assets for those leases and leasehold improvements, whichever is shorter. Depreciation and amortization for property and equipment is calculated using the straight-line method over the following estimated lives:

- Machinery and equipment — 4-10 years
- Furniture, fixtures and fittings — 3-10 years
- Leasehold improvements — up to 10 years

See Note I – Property and Equipment for more information.

Capitalized Software

We capitalize software both for internal use and for inclusion in our products. For internal use software, costs incurred in the preliminary project stage of developing or acquiring internal use software are expensed as incurred. After the preliminary project stage is completed, management has approved the project and it is probable that the project will be completed and the software will be used for its intended purpose, we capitalize certain internal and external costs incurred to acquire or create internal use software, principally related to software coding, designing system interfaces and installation and testing of the software. We amortize capitalized internal use software costs using the straight-line method over the estimated useful life of the software, generally for three years.

For software embedded in our products, we capitalize software development costs when technological feasibility is established and conclude capitalization when the hardware product is ready for release. We amortize capitalized costs for software to be sold using the straight-line method over the estimated useful life based on anticipated revenue streams of the software, generally for three years. Software development costs incurred prior to the establishment of technological feasibility are expensed as incurred as engineering and development. See Note J – Intangible Assets for more information.

Intangible Assets, Including Goodwill

Intangible assets consist of acquired customer relationships and intellectual property, patents and trademarks, and goodwill. These assets, except for goodwill and trade names, are amortized over their expected useful lives. Acquired customer relationships are amortized using the straight line method, which approximates the pattern over which the economic benefits are being utilized, using lives of 4 to 11 years. Acquired intellectual property and patents are amortized using the straight-line method over 7 to 16 years, representing the shorter of their estimated useful lives or the period until the patent renews. Costs to maintain patents are expensed as incurred while costs to renew patents are capitalized and amortized over the remaining estimated useful lives.

Goodwill and trade names are not amortized but are subject to an annual impairment test, and more frequently if events or circumstances occur that would indicate a potential decline in its fair value. An impairment charge will be recognized only when the implied fair value of a reporting unit's goodwill is less than its carrying amount. The annual assessment of goodwill for impairment includes comparing the fair value of each reporting unit to the carrying value, referred to as Step One. If the fair value of a reporting unit exceeds its carrying value, goodwill is not impaired and no further testing is necessary. If the carrying value of a reporting unit exceeds its fair value, a second test is performed, referred to as Step Two, to measure the amount of impairment to goodwill, if any. To measure the amount of any impairment, we determine the implied fair value of goodwill in the same manner as if we were acquiring the affected reporting unit in a business combination. Specifically, we allocate the fair value of the affected reporting unit to all of the assets and liabilities of that unit, including any unrecognized intangible assets, in a hypothetical calculation that would yield the implied fair value of goodwill. If the implied fair value of goodwill is less than the goodwill recorded on the consolidated balance sheet, an impairment charge for the difference is recorded. We assess goodwill (and trade names as applicable) annually for our four reporting units, all of which are components of our single reportable operating segment. We elected to change our annual goodwill impairment testing measurement date from October 1 to December 1 effective October 1, 2016, primarily to better align our measurement date with our financial projections, as well as our annual strategic, financial planning, and budgeting processes. There was no impact of the change in measurement date.

We base the impairment analysis of intangible assets, including goodwill on estimated fair values. The fair value of reporting units for assessing goodwill is principally based on discounted cash flow models and using a relief from royalty method for other intangible assets. The assumptions, inputs and judgments used in estimating fair values are inherently subjective and reflect estimates based on known facts and circumstances at the time the valuations are performed. These estimates and assumptions primarily include, but are not limited to, discount rates, terminal growth rates, projected revenues and costs, projected cash flows, capital expenditure forecasts, and royalty rates.

In 2016, we recorded impairment charges of $2.1 million and $9.7 million for tradenames and goodwill related to our Omnilink product line, respectively. Additionally we recorded impairment charges of $0.2 million and $0.1 million for goodwill and technology for our DIY product line. See Note J – Intangible Assets for more information.

Impairment of Long-lived Assets

Long-lived assets, such as property and equipment and other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount which the carrying amount of the asset exceeds the fair value of the asset. No impairment charges were recorded during the year ended December 31, 2016. During the year ended December 31, 2015, we recorded an impairment charge of $1.3 million for prepaid carrier fees in other assets affecting multiple reporting units. See Note H – Prepaid Expenses and Other Assets for more information.

Income Taxes

We account for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using the enacted tax rates applied to taxable income. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for deferred tax assets when it is more likely than not that the asset will not be realized.

We conduct business globally and file income tax returns in the United States and in many state and certain foreign jurisdictions. We are subject to state and local income tax examinations for years after and including 1998. These tax years remain open due to the net operating losses generated in these years that have not been utilized as of the year ended December 31, 2016. Likewise, the existence of net operating losses from earlier periods could subject us to United States federal income tax examination for years including and after 2001, since such net operating losses have not been utilized as of the year ended December 31, 2016. See Note K – Income Taxes for more information.

Treasury Stock

We account for treasury stock under the cost method. When treasury stock is re-issued at a higher price than its cost, the difference is recorded as a component of additional paid-in capital to the extent that there are gains to offset the losses. If there are no treasury stock gains in additional paid-in capital, the losses are recorded as a component of accumulated deficit.

Other Comprehensive (Loss) Income and Foreign Currency Translation

Other comprehensive (loss) income consists of adjustments, net of tax, related to unrealized gains (losses) on foreign currency translation. These are reported in accumulated other comprehensive (loss) income as a separate component of shareholders' equity until realized in earnings. The assets and liabilities of our foreign operations are translated into U.S. dollars at the period end spot exchange rates, and revenues and expenses are translated at estimated average exchange rates for each period. Resulting translation adjustments are reflected as other comprehensive loss in the consolidated statements of operations and comprehensive (loss) income and within shareholders' equity. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are included in the results of operations as incurred. Foreign operations are not significant to us for the years ended December 31, 2016, 2015 or 2014.

Revenue Recognition

Our revenue is generated from two primary sources, subscription fees and the sale of IoT devices and hardware. Revenue is recognized when persuasive evidence of an agreement exists, the hardware or service has been delivered, fees and prices are fixed and determinable, collection is reasonably assured and all other significant obligations have been fulfilled. Revenue is recognized net of sales tax and any other transactional taxes.

Subscription fees are based on the number of devices (subscriptions) on our integrated IoT horizontal platform network. Subscription fees are typically invoiced and recognized as revenue as we provide the services or process transactions in accordance with contractual performance standards. Customer contracts are generally recurring or multi-year agreements. Subscription fee revenues for managed service arrangements include all of the key IoT components – device, network, application and platform. Subscription fees also include volume-based excess network usage, messages and other activity that are recognized in revenue as incurred, consistent with contractual terms. We may, under an appropriate agreement, bill subscription fees in advance for the network service to be provided. In these instances, we recognize the advance charge (even if nonrefundable) as deferred revenue and recognize the revenue over future periods in accordance with the contract term as the network service (time, data or minutes) is provided, delivered or performed. Subscription revenue may also include activation fees which are deferred and recognized ratably over the estimated life of the subscription to which the activation fee relates. Direct and incremental costs associated with deferred revenue are also deferred, classified as deferred costs in prepaid expense and other assets in our consolidated balance sheets, and recognized in the period revenue is recognized under managed service arrangements. For managed services, cost of embedded devices and hardware are capitalized as fixed assets and depreciated over the estimated life of the hardware. Unbilled revenue consists of earned revenue that results from non-calendar month billing cycles and the one-month lag time in billing related to certain of our services.

We recognize revenue from the sale of IoT devices and hardware at the time of shipment and passage of title. Provisions for rebates, promotions, product returns and discounts to customers are recorded as a reduction in revenue in the same period that the revenue is recognized. We offer customers the right to return hardware that does not function properly within thirty to ninety days after delivery. We continuously monitor and track such hardware returns and record a provision for the estimated amount of such future returns based on historical experience and any notification received of pending returns. While such returns have historically been within expectations and the provisions established, we cannot guarantee that we will continue to experience the same return rates that we have experienced in the past. Any significant increase in hardware failure rates and the resulting credit returns could have a material adverse impact on operating results for the period or periods in which such returns materialize. Shipping and handling fees received from customers are recorded with embedded device and hardware revenue and associated costs are recorded in cost of embedded devices and hardware.

On occasion we sell both hardware and monthly recurring services to the same customer. In such cases, we evaluate such arrangements to determine whether a multiple-element arrangement exists. For multiple-element revenue arrangements, we allocate arrangement consideration at the inception of an arrangement to all elements using the relative selling price method. The hierarchy for determining the selling price of a deliverable includes (a) vendor-specific objective evidence, if available, (b) third-party evidence, if vendor-specific objective evidence is not available and (c) our best estimate of the selling price, if neither vendor-specific nor third-party evidence is available. In most cases, neither vendor-specific objective evidence nor third-party evidence is available, and we use the best estimate of the selling price, which is based on consistent selling price. Certain judgments and estimates are made and used to determine revenue recognized in any accounting period. If estimates are revised, material differences may result in the amount and timing of revenues recognized for a given period.

Advertising Expenses

Advertising expenses are charged to operations in the period in which they are incurred. For the years ended December 31, 2016, 2015 and 2014, advertising costs were approximately $1.1 million, $1.0 million and $0.9 million, respectively.

Equity-Based Compensation

Compensation cost is recognized for all equity-based payments granted and is based on the grant-date fair value estimated using the Black-Scholes option pricing model. Our determination of fair value of equity-based payment awards on the date of grant using the option-pricing model is affected by our share price and our valuation assumptions. Certain grants to executives require achievement of market conditions before the grant may be exercised. The fair value of awards with market exercise conditions is estimated on the date of grant using a lattice model with a Monte Carlo simulation. These primary variables include our expected share price volatility over the estimated life of the awards and actual and projected exercise behaviors.

As employees vest in their awards, compensation cost is recognized over the requisite service period with an offsetting credit to additional paid-in capital. Equity-based compensation expense is based on awards ultimately expected to vest and has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures are expected to differ from those estimates. See Note O – Equity-Based Compensation for more information.

Engineering and Development

Engineering and development expenses that are not capitalizable as internally developed software are charged to operations in the period in which they are incurred. Engineering and development costs consist primarily of salaries and other personnel-related costs, bonuses, and third-party services. For the years ended December 31, 2016, 2015 and 2014, engineering and development costs recorded in operations were $9.2 million, $9.0 million and $8.0 million, respectively.

Earnings Per Share

Basic earnings per share is computed by dividing net (loss) income attributable to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted earnings per share is computed by giving effect to all potentially dilutive common shares outstanding during the period. Potentially dilutive common shares consist of outstanding stock options and restricted stock units, calculated using the treasury stock method. See Note S – Earnings Per Share for more information.

Liquidity

As indicated in the accompanying consolidated financial statements, the Company incurred operating losses totaling $22.8 million and $8.6 million and cash used in operations totaling $0.5 million and cash provided by operations of $8.9 million for the years ended December 31, 2016 and 2015, respectively. As of December 31, 2016, the Company has an accumulated deficit of $48.3 million, and cash and cash equivalents of $9.5 million. The Company's cash flow requirements during 2016 were financed by cash on hand and cash generated by operations. The Company had total long term debt, including current portion, of $16.2 million as of December 31, 2016. The Company's ability to continue in business is dependent on its ability to continue to generate operating cash flows, to maintain sufficient cash on hand, to raise additional capital, and an ability to control expenditures. Management believes that the Company will maintain sufficient liquidity through at least March 2018. The consolidated financial statements do not include any adjustments that might result from this uncertainty.

Reclassifications

As a result of the adoption of a recent accounting pronouncement, see Recently Adopted Accounting Guidance below, the balance sheet as of December 31, 2015 reflects the following reclassifications (dollars in thousands):

	Historical Presentation	Reclassi-fication	As Adjusted
Prepaid expenses and other current assets	$ 2,037	$ (150)	$ 1,887
Other assets	699	(290)	409
Current portion of long-term debt	3,750	(150)	3,600
Long-term debt, less current portion	15,599	(290)	15,309

Recently Adopted Accounting Guidance

In March 2015, the Financial Accounting Standards Board (FASB) issued guidance about simplifying the presentation of deferred financing costs. The guidance was intended to help clarify deferred financing costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The recognition and measurement guidance for deferred financing costs were not affected. The guidance was effective January 1, 2016 and, in accordance with the guidance, $0.8 million of deferred financing costs is netted against long-term debt as of December 31, 2016 and $0.4 million of deferred financing costs was reclassified from current and noncurrent other assets to the current and noncurrent portions of long-term debt as of December 31, 2015.

In September 2015, the FASB issued guidance to simplify the accounting for measurement-period adjustments for an acquirer in a business combination. The update requires an acquirer to recognize any adjustments to provisional amounts of the initial accounting for a business combination with a corresponding adjustment to goodwill in the reporting period in which the adjustments are determined in the measurement period, as opposed to revising prior periods presented in financial statements. Thus, an acquirer shall adjust its financial statements as needed, including recognizing in its current-period earnings the full effect of changes in depreciation, amortization, or other income effects, by line item, if any, as a result of the change to the provisional amounts calculated as if the accounting had been completed at the acquisition date. This update was effective January 1, 2016 and the adoption of this guidance did not have a material impact on our financial statements.

In March 2016, the FASB issued guidance to improve the accounting for employee share-based payments. Under the new guidance, companies will no longer record excess tax benefits and certain tax deficiencies in additional paid-in capital. Instead, all excess tax benefits and tax deficiencies should be recognized as income tax expense or benefit in the income statement, and additional paid-in capital pools will be eliminated. The guidance requires companies to present excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity. It also makes several changes to the accounting for forfeitures and employee tax withholding on share-based compensation. This guidance is effective for annual periods beginning after December 16, 2016, and interim periods within those annual periods, but may be adopted earlier. The Company adopted this guidance in the fourth quarter of fiscal 2016 for the annual period ended December 31, 2016. The impact of the adoption of this standard was to reduce our deferred tax assets as well as the offsetting valuation allowance by $3.4 million. See Footnote K - Income Taxes. Periods prior to January 1, 2016 have not been adjusted.

In August 2014, the FASB issued guidance about disclosing an entity's ability to continue as a going concern. The guidance is intended to define management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. This update was effective December 15, 2016 and the adoption of this guidance did not have a material impact on our financial statements.

In November 2015, the FASB issued guidance requiring all deferred tax assets and liabilities to be classified as non-current on the balance sheet instead of separating deferred taxes into current and non-current amounts. In addition, valuation allowance allocations between current and non-current deferred tax assets are no longer required because those allowances also will be classified as non-current. The Company adopted this guidance in the fourth quarter of fiscal 2016 for the annual period ended December 31, 2016. Periods prior to January 1, 2016 have not been adjusted, as we are adopting prospectively.

In July 2015, the FASB issued guidance intended to simplify the presentation of applicable inventory at the lower of cost or net realizable value. The new guidance clarifies that net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Subsequent measurement is unchanged for inventory measured using LIFO or the retail inventory method. This update was effective December 15, 2016 and the adoption of this guidance did not have a material impact on our financial statements.

In June 2014, the FASB issued guidance that applies to all reporting entities that grant their employees share-based payments in which the terms of the award provide that a performance target that affects vesting could be achieved after the requisite service period. It requires that a performance target that affects vesting, and that could be achieved after the requisite service period, be treated as a performance condition and follows existing accounting guidance for the treatment of performance conditions. This update was effective January 1, 2016 and the adoption of this guidance did not have a material impact on our financial statements.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (FASB) issued guidance that requires lessees to recognize most leases as assets and liabilities on the balance sheet. Qualitative and quantitative disclosures will be enhanced to better understand the amount, timing and uncertainty of cash flows arising from leases. The guidance is effective for annual and interim periods beginning after December 15, 2018. The updated standard mandates a modified retrospective transition method with early adoption permitted. We are currently evaluating the effect that the updated standard will have on our financial statements.

In May 2014, the FASB issued guidance which amends the existing accounting standards for revenue recognition. In August 2015, the FASB issued additional guidance which delays the effective date by one year. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date. In March 2016, the FASB issued guidance which clarifies the implementation guidance on principal versus agent considerations. The guidance includes indicators to assist an entity in determining whether it controls a specified good or service before it is transferred to the customers. The new revenue recognition standard will be effective for us in the first quarter of 2018, with the option to adopt it in the first quarter of 2017. We currently anticipate adopting the new standard effective January 1, 2018. The new standard also permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). We currently anticipate adopting the standard using the modified retrospective method. We are concluding the assessment phase of implementing this guidance. We have evaluated each of the five steps in the new revenue recognition model, which are as follows: 1) Identify the contract with the customer; 2) Identify the performance obligations in the contract; 3) Determine the transaction price; 4) Allocate the transaction price to the performance obligations; and 5) Recognize revenue when (or as) performance obligations are satisfied. Our preliminary conclusion is that the determination of what constitutes a contract with our customers (step 1), our performance obligations under the contract (step 2), and the determination and allocation of the transaction price (steps 3 and 4) and recognizing revenue when performance obligations are satisfied (step 5) under the new revenue recognition model will not result in material changes in comparison to our current revenue recognition for our contracts with customers entered into in the normal course of operations. However, we have not yet finalized our analysis.

NOTE B – BUSINESS COMBINATIONS

2014 Merger

On May 5, 2014, in accordance with the terms and conditions of the merger agreement, we merged a wholly-owned subsidiary of Numerex with and into Omnilink Systems Inc. (Omnilink) with Omnilink surviving the merger as a wholly-owned subsidiary of the Company. The purchase price was $37.5 million cash.

Omnilink provides tracking and monitoring services for people and valuable assets via Omnilink's IoT platform that connects hardware, networks, software, and support services. The assets, liabilities and operating results of Omnilink are reflected in our consolidated financial statements commencing from the merger date. Transaction costs of $1.0 million for the year ended December 31, 2014 have been recorded in general and administrative expense in the accompanying consolidated statement of operations and comprehensive (loss) income.

The following table summarizes the fair values of the assets acquired and liabilities assumed as of the closing date of the Omnilink merger (dollars in thousands):

	Fair Value	Estimated Useful Lives
Cash	$ 195	n/a
Accounts receivable	2,677	n/a
Inventory	873	n/a
Prepaid and other assets	377	n/a
Property and equipment	1,613	4 (a)
Deferred tax asset	2,600	n/a
Customer relationships	6,056	11
Technology	4,998	14
Trade names	3,632	Indefinite
Goodwill	17,318	Indefinite
Total identifiable assets acquired	40,339	
Accounts payable	(1,756)	n/a
Accrued expenses	(1,037)	n/a
Deferred revenue	(64)	n/a
Total liabilities assumed	(2,857)	
Net assets acquired	$ 37,482	

(a) The weighted average remaining useful life for all property and equipment is approximately four years.

The total purchase consideration for the merger was allocated to identifiable assets purchased and liabilities assumed based on fair value. The estimated fair value attributed to intangible assets, other than goodwill, was based on common valuation techniques. The fair value of acquired software was estimated using a cost approach based on assumptions of our historical software development costs. The fair value of trade names was based on an income approach with key assumptions including estimated royalty rates to license the trade names from a third party. The valuation of customer relationships utilized an income approach and discounted cash flows taking into consideration the number of customer relationships acquired and estimated customer turnover.

The value of the deferred tax asset and goodwill as disclosed above reflect a subsequent measurement period adjustment of $0.2 million recorded during the three months ended June 30, 2015 to record the final calculation of acquired deferred tax assets. The residual allocation to goodwill results from such factors as an assembled workforce, expected significant synergies for market growth and profitability as well as Omnilink's service and product lines contributing to our becoming the market leader in select IoT vertical markets. The total amount of goodwill will not be deductible for income tax purposes.

Unaudited Pro forma Results

The consolidated statement of operations and comprehensive (loss) income for the year ended December 31, 2014 includes approximately $8.7 million of revenues contributed by Omnilink products and services for the period from May 5, 2014 through December 31, 2014. Immediately upon closing the merger, we began integrating Omnilink's operations with our existing operations. As a result, the legacy and acquired businesses are now sharing various selling, general and administrative functions. Any measure of stand-alone profitability for Omnilink in the post-acquisition period is not material and cannot be calculated accurately due to the shared cost structure of the acquired and legacy businesses.

The following table presents the unaudited pro forma consolidated net revenues, income (loss) from continuing operations before income taxes and net income (loss) for the year ended December 31, 2014, based on the historical statements of operations of Numerex and of Omnilink, giving effect to the Omnilink merger and related financing as if they had occurred on January 1, 2014. The unaudited pro forma financial information is not necessarily indicative of what the consolidated results of operations actually would have been had the acquisition occurred at the beginning of 2014. In addition, the unaudited pro forma financial information does not attempt to project the future results of operations of the combined company (in thousands, except per share data).

	Unaudited Pro Forma Results Year Ended December 31, 2014	
Net revenues	$	98,134
Income (loss) from continuing operations, before income tax		2,719
Net income (loss)		2,147
Basic and diluted income (loss) per common share		0.11

The unaudited pro forma financial information above gives effect to the following:

- Adjust depreciation expense for a 2014 net historical Omnilink reduction of $0.1 million for the effect of recording property and equipment at estimated fair value.
- Adjust amortization expense for a 2014 net increase of $0.3 million for the effect of recording intangible assets at estimated fair value.
- Adjust interest expense for a 2014 net increase of $0.1 million due to the repayment of Omnilink's debt balances in conjunction with the merger and the merger-related debt incurred by Numerex and related amortization of deferred financing costs.
- Adjust expense by $1.0 million to reclassify expense recorded for merger-related costs in the year ended December 31, 2014.

The unaudited pro forma results do not include any revenue or cost reductions that may be achieved through the business combination, or the impact of non-recurring items directly related to the business combination.

NOTE C – DISCONTINUED OPERATIONS

In June 2014, we completed the sale and disposition of components of our business classified as discontinued operations. These components were classified as discontinued operations in June 2013, when we decided to exit certain businesses and related products that were not core to future business plans. These non-core businesses include BNI Solutions, Inc. (BNI), Digilog, Inc. and DCX Systems, Inc. These businesses were previously reported in our consolidated financial statements as a separate segment, "Other Services". The related products and services include video conferencing hardware and installation of telecommunications equipment, all of which were unrelated to our core IoT communication products and services.

All assets and liabilities of discontinued operations were disposed of during the quarter ended June 30, 2014 as a result of the completed sale of all the capital stock of BNI. All revenue and expense of the discontinued operations were reclassified and presented in the accompanying consolidated statements of operations and comprehensive (loss) income as loss from discontinued operations, net of income taxes, after (loss) income from continuing operations, net of income tax benefit and before net (loss) income. Similarly, all cash flows of the discontinued operations were reclassified and presented in the accompanying consolidated statements of cash flows as net cash provided by discontinued operations.

On June 30, 2014, we completed the sale of all of the capital stock of BNI and the disposition of the remaining discontinued operations. The following table presents the financial results of the discontinued operations (in thousands):

	Year Ended December 31, 2014
Revenues from discontinued operations	$ 207
Loss from discontinued operations before income taxes	$ (285)
Income tax benefit	(127)
Loss from discontinued operations, net of income taxes	(158)
Loss on disposal of subsidiary included in discontinued operations	(309)
Loss on dissolution of subsidiaries included in discontinued operations	(25)
Net loss from discontinued operations	$ (492)

There are no assets or liabilities reported as discontinued operations as of December 31, 2016 and 2015, due to our disposal of all discontinued operations.

NOTE D – FAIR VALUE MEASUREMENTS

We account for certain assets at fair value. The hierarchy below lists three levels of fair value based on the extent to which inputs used in measuring fair value are observable in the market. We categorize each of our fair value measurements in one of these three levels based on the lowest level input that is significant to the fair value measurement in its entirety. These levels are:

Level 1 —Valuations based on quoted prices for identical assets and liabilities in active markets.

Level 2 —Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3 —Valuations based on unobservable inputs reflecting our own assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

Assets measured at fair value on a recurring basis comprise only investments in short-term US Treasury Funds of $0 and $15.5 million as of December 31, 2016 and 2015, respectively. The investments were classified as available for sale debt securities included in cash and cash equivalents in the consolidated balance sheets and are categorized as Level 1 measurements in the fair value hierarchy. We do not have any liabilities measured at fair value on a recurring basis.

The following table summarizes assets measured at fair value on a nonrecurring basis during the year ended December 31, 2016 and 2015 (in thousands):

	2016		
	Fair Value	Level 3	Total Losses
June 30, 2016			
DIY Reporting Unit			
Technology	$ 164	$ 164	$ 81
Goodwilll	1,441	1,441	215
December 1, 2016			
Omnilink Reporting Unit			
Indefinite lived trade names	918	918	2,054
Goodwill	7,925	7,925	9,655
Total nonrecurring fair value measurements	$ 10,448	$ 10,448	$ 12,005

	2015		
	Fair Value	Level 3	Total Losses
September 30, 2015			
DIY Reporting Unit			
Amortizing Intangible Assets	$ 825	$ 825	$ 446
Goodwilll	1,656	1,656	924
October 1, 2015			
Omnilink Reporting Unit			
Amortizing intangible assets	4,900	4,900	660
Indefinite lived trade names	2,972	2,972	682
Total nonrecurring fair value measurements	$ 10,353	$ 10,353	$ 2,712

See Note J – Intangible Assets for more information.

NOTE E – ACCOUNTS RECEIVABLE

Accounts receivable and related allowance for doubtful accounts consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Accounts receivable	$ 9,748	$ 9,218
Unbilled accounts receivable	455	637
Allowance for doubtful accounts	(767)	(618)
	$ 9,436	$ 9,237

NOTE F – FINANCING RECEIVABLES

We lease certain hardware devices to a small number of hardware distributors under sales-type leases expiring in various years through 2021. These receivables typically have terms ranging from two to four years and bear interest at 2%. Because the devices are not functional on our network without an active service agreement with us, we can de-activate devices for non-payment, and have therefore established a history of successfully collecting amounts due under the original payment terms without making concessions to customers. In addition, our long-standing relationships with these high credit quality customers support our assertion that revenues are fixed and determinable and probable of collection.

The components of financing receivables were as follows (in thousands):

	As of December 31,	
	2016	2015
Total minimum lease payments receivable	$ 4,005	$ 4,266
Unearned income	(133)	(156)
Present value of future minimum lease payments receivable	3,872	4,110
Current Portion	1,778	1,780
Amounts due after one year	$ 2,227	$ 2,330

Future minimum lease payments to be received subsequent to December 31, 2016 are as follows (in thousands):

2017	$ 1,854
2018	1,192
2019	665
2020	289
2021	5
	$ 4,005

Our financing receivables are comprised of a single portfolio segment because of the small number of customers and the similar nature of the sales-type leasing arrangements. We evaluate the credit quality of financing receivables based on a combination of factors, including, but not limited to, customer collection experience, economic conditions, the customer's financial condition and known risk characteristics impacting the respective end users of our customers.

We utilize historical collection experience from our population of similar customers to establish any allowance for credit losses. Financing receivables are placed in non-accrual status after 60 days of nonpayment and written off only after we have exhausted all collection efforts. We have been successful collecting financing receivables and consider the credit quality of such arrangements to be good. We have not experienced any material credit losses for any period in the three years ended December 31, 2016. Customer payments are considered past due if a scheduled payment is not received within contractually agreed upon terms. As of December 31, 2016, there were no financing receivables past due more than 30 days.

NOTE G – INVENTORY

Inventory consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Raw materials	$ 2,953	$ 1,903
Finished goods	8,504	8,420
Inventory reserves	(2,446)	(2,706)
	$ 9,011	$ 7,617

NOTE H – PREPAID EXPENSES AND OTHER ASSETS

Prepaid expenses and other current assets consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Prepaid expenses	$ 749	$ 752
Deferred costs	526	718
Other	146	417
	$ 1,421	$ 1,887

Other noncurrent assets consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Deferred activation fees	$ 360	$ 293
Deposits	114	116
	$ 474	$ 409

During 2011, we purchased and installed telecommunication infrastructure equipment and related equipment to improve the capacity and functionality of our devices operating on one of our carrier networks. To comply with the needs of one of our carriers and in exchange for more favorable carrier fees, we transferred the legal right to the equipment to the vendor. Thus, our existing agreement with this vendor was amended to provide for the new carrier fees and the legal transfer of the equipment. We accounted for this transaction as a non-monetary exchange. The $2.2 million cost of the equipment was determined to be its fair value and we recorded this transaction by transferring the equipment cost to prepaid carrier fees. During 2014, we made a prepayment of $0.4 million to the same carrier to license additional network access, which is recorded within prepaid expenses . Both prepaid expenses were being amortized in cost of sales for subscription and support revenue on a straight-line basis over the term of the agreement, which was to expire in 2021.

In September 2015, we entered into a mutual agreement with the vendor to (1) cancel the existing agreement, (2) purchase certain equipment from the vendor and (3) assume certain national carrier and other agreements from the vendor. Total consideration was $1.2 million and included (1) $0.5 million in cash, (2) 30,000 shares of our common stock having a value of $0.3 million and (3) the prepayment above to license additional network access having a carrying value of $0.4 million. Consummation of the transaction, which was contingent upon obtaining consents from certain of our vendor's carriers, closed in October 2015. During negotiations with the vendor in the third quarter for the fiscal year 2015, a triggering event was identified for purposes of assessing long-lived assets for impairment, as it was more likely than not that the aforementioned assets would be disposed of significantly before the end of their previously estimated useful life. As a result of this transaction and in conjunction with a separate agreement with a mutual national carrier, we determined that the prepaid carrier fees had no continuing value. We recorded a charge of $1.3 million in cost of sales to write-off the carrying value of the prepaid carrier fees as a settlement of a pre-existing relationship with the vendor. The impairment charge affected multiple reporting units.

NOTE I – PROPERTY AND EQUIPMENT

Property and equipment consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Computer, network and other equipment	$ 8,805	$ 7,150
Monitoring equipment	5,692	3,015
Furniture and fixtures	486	888
Leasehold improvements	264	374
Total property and equipment	15,247	11,427
Accumulated depreciation and amortization	(9,225)	(6,632)
	$ 6,022	$ 4,795

During the year ended December 31, 2016, we transferred $2.7 million of inventory to monitoring equipment within property and equipment. Monitoring equipment includes devices and hardware owned by us and used by customers under managed service arrangements. Depreciation expense for monitoring equipment included in cost of sales for subscription and support revenues in the accompanying consolidated statements of operations and comprehensive (loss) income was $1.4 million, $0.8 million and less than $0.3 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Depreciation and amortization expense for property and equipment, including assets totalling $1.2 million recorded as capital leases, was $1.5 million, $2.0 million, and $1.6 million for the years ended December 31, 2016, 2015, and 2014 respectively.

NOTE J – INTANGIBLE ASSETS

Impairment Charges

During the second quarter of 2016, management evaluated and determined that the Omnilink and Do-It-Yourself (DIY) product lines and reporting units should be tested for impairment as a result of lower than expected operating results, which were related to strategic changes and delays associated with the launch of a new personal tracking product line. Management initiated a quantitative two-step goodwill impairment test by comparing the carrying value of the net assets of the respective units to their fair values based on a discounted cash flow analysis. Based on our assessment under the two-step impairment test, we determined that the fair values of these reporting units were less than the respective carrying values; therefore we performed Step 2 of the impairment test, which indicated that goodwill was impaired, and we recorded $4.2 million in impairment charges.

We elected to change our annual goodwill impairment testing measurement date from October 1 to December 1 effective October 1, 2016, primarily to better align our measurement date with our financial projections, as well as our annual strategic, financial planning, and budgeting processes. There was no impact on our analysis from the change in measurement date.

As part of our annual assessment of goodwill at December 1, 2016, the carrying values of our Omnilink and DIY reporting units were found to be greater than the calculated fair values. Significant assumptions used in our assessment included the discount rates, growth rate assumptions, long term growth rates assumptions, and EBITDA margins. Accordingly, we performed a Step 2 analysis for these reporting units and recorded goodwill impairment of $7.4 million for our Omnilink reporting unit. No impairment was recorded for DIY goodwill as no impairment was indicated in the Step 2 analysis. As part of our December 1, 2016 assessment we also recorded $0.4 million of impairment related to the Omnilink Trade Name. The decrease in the fair value of the DIY reporting unit was principally due to the reporting unit not generating results of operations consistent with our expectations and previous forecasts. The decrease in the fair value of the Omnilink reporting unit was due to two customer contracts which were not renewed during December 2016.

We recorded a total of $2.7 million in impairment charges for goodwill and other intangible assets during the year ended December 31, 2015.

During 2015, our Do-It-Yourself (DIY) product line and reporting unit did not generate results of operations consistent with our expectations and previous forecasts and management was evaluating different strategic options for the reporting unit. These factors were triggering events that it was more likely than not that the fair value of the DIY reporting unit was less than its carrying amount. As a result, we performed our initial assessment of goodwill for impairment, along with other intangible assets of the DIY reporting unit, in the period ended September 30, 2015. Based on preliminary Step 2 calculations, we recorded impairment charges of $0.9 million for goodwill and $0.3 million for patents during the period ended September 30, 2015. We recorded an additional $0.1 million impairment charge for customer relationship intangible assets upon finalizing the Step 2 calculation during the three months ended December 31, 2015.

As part of our annual assessment of goodwill and other intangible assets for impairment as of October 1, 2015, we determined that technology and indefinite-lived trade names acquired in the merger with Omnilink were each impaired by $0.7 million. The decrease in the fair value of both trade names and technology was principally due to a change in the projected revenues and financial returns on intangible assets from the amounts originally projected at the date of the merger.

Changes in values are summarized as follows (in thousands):

		DIY				Omnilink		
	Total Impairment	Goodwill	Technology	Patents	Customer Relationships	Goodwill	Trade Names	Technologies
January 1, 2015		$ 2,580	$ 245	$ 748	$ 1,241	$ 17,580	$ 3,632	$ 4,753
Impairment	$ (2,712)	(924)	-	(325)	(121)	-	(660)	(682)
December 31, 2015		$ 1,656	$ 245	$ 423	$ 1,120	$ 17,580	$ 2,972	$ 4,071
Impairment	$ (12,005)	$ (215)	$ (81)	$ -	$ -	$ (9,655)	$ (2,054)	$ -
December 31, 2016		$ 1,441	$ 164	$ 423	$ 1,120	$ 7,925	$ 918	$ 4,071
Accumulated Amortization		$ -	$ (42)	$ (213)	$ (736)	$ -	$ -	$ (780)
Carrying Value -December 31, 2016		$ 1,441	$ 122	$ 210	$ 384	$ 7,925	$ 918	$ 3,291

Intangible Assets Other Than Goodwill

Intangible assets other than goodwill are summarized as follows (dollars in thousands ***):***

	As of December 31, 2016				As of December 31, 2015		
	Remaining Useful Lives	**Gross Carrying Amount**	**Accumulated Amortization**	**Net Book Value**	**Gross Carrying Amount**	**Accumulated Amortization**	**Net Book Value**
Purchased and developed software	1.8	$ 18,205	$ (12,806)	$ 5,399	$ 15,399	$ (9,503)	$ 5,896
Software in development	n/a	1,131	-	1,131	1,250	-	1,250
Total software		19,336	(12,806)	6,530	16,649	(9,503)	7,146
Licenses	2.6	13,215	(12,534)	681	13,215	(12,167)	1,048
Customer relationships	7.6	8,167	(3,039)	5,128	8,167	(2,285)	5,882
Technologies	11.1	4,235	(822)	3,413	4,316	(595)	3,721
Patents and trademarks	2.0	3,747	(2,368)	1,379	4,236	(2,137)	2,099
Trade names	Indefinite	918	-	918	2,972	-	2,972
Total other intangible assets		30,367	(18,848)	11,519	32,906	(17,184)	15,722
		$ 49,703	$ (31,654)	$ 18,049	$ 49,555	$ (26,687)	$ 22,868

Remaining useful lives in the preceding table were calculated on a weighted average basis as of December 31, 2016. We did not incur costs to renew or extend the term of acquired intangible assets during the year ended December 31, 2016. Amortization expense for intangible assets for the years ended December 31, 2016, 2015 and 2014 was $5.0 million, $5.1 million, and $4.6 million, respectively. In addition, $0.3 million of amortization expense for intangible assets is recorded in cost of subscription and support revenue in the accompanying consolidated statement of operations and comprehensive (loss) income for each of the years ended December 31, 2016 and 2015, and $0.2 million for the year ended December 31, 2014.

During the years ended December 31, 2016 and 2015, we capitalized approximately $1.6 million and $2.2 million, respectively, of internally developed software costs. Amortization expense for capitalized internally developed software for the years ended December 31, 2016, 2015 and 2014 was $1.9 million, $1.7 million and $1.4 million, respectively, included in total amortization expense disclosed above.

Amortization expense for the next five years is summarized as follows based on intangible assets as of December 31, 2016 (in thousands):

2017	$ 4,315
2018	3,308
2019	1,679
2020	1,021
2021	960
Thereafter	4,440
	$ 15,723

Goodwill and Trade Names

The carrying amount of goodwill and trade names for the years ended December 31, 2016 and 2015, are as follows (in thousands):

	Goodwill	Trade names
December 31, 2014	44,348	3,632
Impairment	(924)	(660)
December 31, 2015	$ 43,424	$ 2,972
Impairment	(9,870)	(2,054)
December 31, 2016	$ 33,554	$ 918

Our gross goodwill balance as of December 31, 2016, 2015, and 2014 was $48.7 million. Accumulated impairment losses were $15.1 million as of December 31, 2016, and $5.3 million as of December 31, 2015.

NOTE K – INCOME TAXES

The provision (benefit) for income taxes consisted of the following (in thousands):

	Years Ended December 31,		
	2016	**2015**	**2014**
Current:			
Federal	$ 208	$ (31)	$ 73
State	10	13	38
Reserve	(34)	(36)	(57)
Deferred:			
Federal	(467)	9,142	546
State	(57)	814	(181)
	$ (340)	$ 9,902	$ 419

Income taxes recorded by us differ from the amounts computed by applying the statutory U.S. federal income tax rate to (loss) income before income taxes. The following schedule reconciles income tax provision (benefit) at the statutory rate and the actual income tax expense as reflected in the consolidated statements of operations and comprehensive (loss) income for the respective periods (in thousands):

	Years Ended December 31,		
	2016	**2015**	**2014**
Income tax expense (benefit) computed at			
U.S. corporate tax rate of 34%	$ (8,384)	$ (3,147)	$ 903
Adjustments attributable to:			
Valuation allowance	4,486	13,053	1,077
Income tax payable adjustments	210	-	-
State income tax	(50)	13	24
Reserve for uncertain tax positions	(34)	(36)	(57)
Goodwill impairment	3,283	-	-
Nondeductible expenses	8	19	(1,575)
Other	141	-	47
	$ (340)	$ 9,902	$ 419

In 2016, we continued to maintain our full valuation allowance on our deferred tax assets, as we have determined that we would not meet the criteria of “more likely than not” that our federal and state net operating losses and certain other deferred tax assets would be recoverable. This determination was based on our assessment of both positive and negative evidence regarding realization of our deferred tax assets, in particular, the strong negative evidence associated with our cumulative loss over the past three years. As a result of the adoption of the guidance improving accounting for share based payments, we reduced our deferred tax assets as well as the offsetting valuation allowance by $3.4 million. See Note A – Summary of Significant Accounting Policies.

During 2015, we determined that we would not meet the criteria of “more likely than not” that our federal and state net operating losses and certain other deferred tax assets would be recoverable. This determination was based on our assessment of both positive and negative evidence regarding realization of our deferred tax assets, in particular, the strong negative evidence associated with our cumulative loss over the past three years. Accordingly, we recorded a valuation allowance against these items. The deferred tax assets consist of federal net operating losses, state net operating losses, tax credits, and other deferred tax assets, most of which expire between 2016 and 2036. As a result of recording the valuation allowance, we recognized deferred tax expense of $9.9 million for the year ended December 31, 2015. Income tax expense recorded in the future will be reduced or increased to the extent of offsetting decreases or increases to the valuation allowance.

During the year ended December 31, 2014, we determined that it would be more likely than not, that certain additional state net operating losses would also be recoverable. We maintained a valuation allowance against certain other deferred tax assets that we determined we would likely not utilize before expiration. Deferred tax assets that were still subject to a valuation allowance include certain state net operating losses, tax credits, capital loss carryforward and foreign net operating losses. As a result of the release of the valuation allowances we recognized a deferred tax benefit of $0.2 million during the year ended December 31, 2014. Additionally, the valuation allowance increased by $1.3 million due to a capital loss carryforward for the year ended December 31, 2014.

The components of our net deferred tax assets and liabilities are as follows (in thousands):

	As of December 31, 2016	As of December 31, 2015
Deferred tax assets:		
Inventories	$ 914	$ 1,005
Accruals	927	839
Other current deferred tax assets	-	88
Equity-based compensation	3,182	2,970
Federal, state and foreign net operating loss carry forwards	20,942	13,677
Tax credit carry forward	1,284	1,284
Deferred revenue	-	23
Difference between book and tax basis of property	257	-
Valuation allowance	(24,622)	(16,417)
	2,884	3,469
Deferred tax liabilities:		
Difference between book and tax basis of property	-	(191)
Intangible assets	(3,352)	(4,270)
	(3,352)	(4,461)
Net deferred tax liabilities	$ (468)	$ (992)

The decrease in deferred tax liabilities related to federal and state net operating loss carry forwards is primarily due to increasing the valuation allowance on net operating loss carryforwards. Net operating loss carryforwards available at December 31, 2016 expire as follows (in thousands):

	Amount	Year of Expiration
Federal net operating losses	$ 48,276	2023-2036
State net operating losses	65,345	2016-2036
Alternative minimum tax credit carryforwards	771	n/a
General business credit carryforwards	513	2018-2031

We file U.S., state and foreign income tax returns in jurisdictions with varying statutes of limitation. The 2002 through 2015 tax years generally remain subject to examination by federal and most state tax authorities. However, certain returns from years as early as 1998, in which net operating losses were generated, remain open for examination by the tax authorities.

As of December 31, 2016, we have evaluated liabilities for uncertain tax positions, and as a result have determined that there is no need for a liability for unrecognized tax benefits. As of December 31, 2015, we recorded a net decrease to the liability for unrecognized tax benefits of less than $0.1 million in income tax benefit. This amount is comprised of tax benefits recognized due to expiration of statute of limitations on certain prior period state tax matters and the corresponding accrual of estimated penalties and interest. Our total unrecognized tax benefits as of December 31, 2015 were less than $0.1 million including estimated penalties and interest.

The following table summarizes the activity related to our unrecognized tax benefits, net of federal benefit, and excludes interest and penalties (in thousands):

	2016	2015
Balance at January 1,	$ 25	$ 54
Decreases as a result of positions taken during prior periods	(25)	(29)
Balance at December 31,	$ -	$ 25

NOTE L – OTHER LIABILITIES

Other current liabilities consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Payroll related	$ 1,545	$ 898
Accrued expenses	1,664	1,966
	$ 3,209	$ 2,864

Other noncurrent liabilities consisted of the following (in thousands):

	As of December 31,	
	2016	2015
Deferred revenue	$ 721	$ 993
Deferred rent	39	863
Sublease loss	696	-
Other	56	35
	$ 1,512	$ 1,891

NOTE M – DEBT

Debt consisted of the following (dollars in thousands):

	As of December 31,	
	2016	2015
Note payable to Silicon Valley Bank, repaid in 2016	$ -	$ 19,349
Note payable to Crystal Financial LLC, with interest at LIBOR plus Margin	17,000	
Less deferred financing costs	(840)	(440)
	16,160	18,909
Less current portion of long-term debt	(1,275)	(3,600)
Noncurrent portion of long-term debt	$ 14,885	$ 15,309

Crystal Financial LLC Loan

On March 15, 2016, we and certain of our wholly-owned, consolidated subsidiaries entered into a new term loan agreement with Crystal Financial LLC as Term Agent, and the term lenders party thereto (the "Crystal Loan Agreement") pursuant to which the term lenders made a term loan to us in the amount of $17.0 million. The net proceeds from the term loan (after payment of the fees and expenses of the Term Agent), along with $2.9 million of cash on hand, were used to repay the $19.4 million outstanding debt under the Silicon Valley Bank (SVB) Loan Agreement and pay related transaction fees. We recorded a charge of $0.3 million to loss on extinguishment of debt for unamortized deferred financing costs related to the SVB Loan Agreement during the year ended December 31, 2016.

The maturity date of the term loan was March 15, 2020. We were required to make regular quarterly principal payments of $0.6 million beginning September 1, 2017 with the balance due on the maturity date, if not otherwise repaid earlier by way of voluntary prepayments, or upon the occurrence of certain Prepayment Events or Excess Cash Flow (as defined in the Crystal Loan Agreement), or as a result of acceleration of the loan as a result of an event of default. Prepayments of the loan were subject to a prepayment penalty of 3% of the amount prepaid if prepayment occurs prior to the first anniversary of the closing date and 2% of the amount prepaid if the prepayment occurs on or after the first anniversary of the closing date but prior to the second anniversary date of the closing date. There was no prepayment penalty for prepayments that occur on or after the second anniversary of the closing date. The interest rate payable on the outstanding loan amount was determined by reference to LIBOR plus a margin established in the agreement. At December 31, 2016, the applicable interest rate was 9.5%.

Our obligations under the Crystal Loan Agreement were secured by a first priority security interest in substantially all of our assets and the assets of our subsidiaries. In addition, we were required to meet certain financial and other restrictive covenants customary with this type of facility, including maintaining a minimum Adjusted EBITDA, minimum Consolidated Fixed Charge Coverage Ratio, maximum Consolidated Total Net Leverage, maximum Subscriber Churn, and minimum Liquidity, all of which are defined in the Crystal Loan Agreement. We were also prohibited from incurring indebtedness, disposing of or permitting liens on our assets and making restricted payments, including cash dividends on shares of our common stock, except as expressly permitted under the Crystal Loan Agreement. The agreement contained customary events of default. If a default occurs and was not cured within the applicable cure period or was not waived, any outstanding obligations under the agreement may be accelerated. As of December 31, 2016, we were not in compliance with our covenants. We have obtained waivers of non-compliance from Crystal Financial LLC and have amended our financial covenants as of March 31, 2017.

On July 29, 2016 and November 3, 2016, we entered into amendments to the Crystal Loan Agreement to modify the covenant relating to the Maximum Subscriber Churn and amend the definition of Adjusted EBITDA. On March 31, 2017, we entered into an amendment to the Crystal Loan Agreement to modify the covenants related to minimum adjusted EBITDA, minimum fixed charge ratio, maximum net leverage, and maximum subscriber churn.

Silicon Valley Bank Loan

On May 5, 2014, we entered into a Second Amended and Restated Loan and Security Agreement (the "SVB Loan Agreement") with Silicon Valley Bank in order to, among other things, establish a term loan of $25.0 million and a revolving line of credit of up to $5.0 million (collectively, the "Credit Facility"). The proceeds from the term loan were used to finance the Omnilink merger. See Note B – Merger and Acquisitions. The first amendment to the SVB Loan Agreement on November 3, 2015 (the "Amendment"), further described below, eliminated the availability of any subsequent advances under the Credit Facility; however, we maintained $0.2 million in outstanding unused letters of credit.

The maturity date of the loan was May 5, 2019 with regular required quarterly principal payments which began June 30, 2014. The remaining principal of $5.0 million would have been due at maturity if not otherwise repaid earlier by way of voluntary Permitted Prepayments or by mandatory Excess Cash Flow Recapture Payments (as defined in the SVB Loan Agreement). The interest rate applicable to amounts drawn pursuant to the SVB Loan Agreement was 2.75% at December 31, 2015 and was, at our option, determined by reference to the prime rate or LIBOR plus a margin established in the SVB Loan Agreement.

Our obligations under the Credit Facility were secured by substantially all of our assets and the assets of our subsidiaries. In addition, we were required to meet certain financial and other restrictive covenants customary with this type of facility, including maintaining a senior leverage ratio, a fixed charge coverage ratio and minimum liquidity availability. We were also prohibited from entering into any debt agreements senior to the Credit Facility and paying dividends. The SVB Loan Agreement contained customary events of default. If a default occurred and was not cured within the applicable cure period or was not waived, any outstanding obligations under the Credit Facility may have been accelerated.

In connection with our acquisition of a small technology business in October 2012, we entered into a Promissory Note of $1.9 million payable to the sellers of the business. This Promissory Note is subordinate to the Credit Facility, bears interest at the greater of prime plus 1% or 4.25% and is payable in monthly installments. As of December 31, 2015, the Promissory Note was paid in full.

The future maturities under the Crystal Loan Agreement are summarized as follows (in thousands):

2017	$ 1,275
2018	2,550
2019	2,550
2020	10,625
	$ 17,000

NOTE N – LEASES, COMMITMENTS AND CONTINGENCIES

Operating Leases

We lease certain property and equipment under non-cancelable operating leases. The leases expire at various dates through 2022. Certain of our leases for office space have annual periods of free rent and escalation clauses of up to 2.5% or $1.00 per square foot, which are straight lined over the term of the lease. The leases also have options to renew for 60-65 months at the end of their terms. Rent expense, including short-term leases, amounted to approximately $1.2 million, $1.7 million and $1.6 million for the years ended December 31, 2016, 2015 and 2014, respectively. Future minimum lease payments under such non-cancelable operating leases subsequent to December 31, 2016, are as follows (in thousands):

Year Ending December 31,		
2017	$	1,785
2018		1,489
2019		1,233
2020		1,172
2021		1,160
Thereafter		870
	$	7,709

We sublease certain office space under non-cancelable operating leases. The leases expire at various dates through 2022. One of our subleases has an escalation clause of 3% annually. For the year ended December 31, 2015, we recognized a loss of $0.1 million related to our subleases recorded in general and administrative expense. Future minimum sublease payments under such non-cancelable operating leases subsequent to December 31, 2016, are as follows (in thousands):

Year Ending December 31,		
2017	$	244
2018		249
2019		256
2020		262
2021		269
Thereafter		205
	$	1,485

Purchase Commitments

We utilize several third-party contract manufacturers to manufacture our products and perform testing of finished products. These contract manufacturers acquire components and build products based on non-cancellable purchase commitments, which typically cover periods less than 12 months. Consistent with industry practice, we acquire components through purchase orders based on projected demand. As of December 31, 2016, we had $5.1 million in open purchase commitments for inventory.

Product Warranties

We typically provide a limited, one-year repair or replacement warranty on purchased hardware-based products. We provide limited repair or replacement warranty on managed service hardware-based products over the term of the managed service agreement ranging from three to five years. To date, warranty costs and the cost of maintaining our warranty programs have not been material to our business.

Capital Leases

We record leases in which we have substantially all of the benefits and risks of ownership as capital leases and all other leases as operating leases. For leases determined to be capital leases, we record the assets held under capital lease and related obligations at the lesser of the present value of aggregate future minimum lease payments or the fair value of the assets held under capital lease. We amortize the underlying assets over the expected life of the assets if we expect to retain title to the assets at the end of the lease term; otherwise we amortize the asset over the term of the lease.

In March 2016, we entered into a 60-month lease arrangement for computer and network equipment, software and related costs having a value of $1.2 million. The lease commenced in April 2016 and is accounted for as a capital lease, and is recorded in property and equipment, net. Future minimum capital lease payments and the present value of the net minimum lease payments for the capital leases as of December 31, 2016 are as follows (in thousands):

Total minimum lease payments	$ 1,211
Less amounts representing interest	(123)
Present value of future minimum lease payments	1,088
Less current portion	(291)
Amounts due after one year	$ 797

During 2013, we entered into a sale leaseback arrangement for computer and network equipment having a value of $0.7 million and expiring in 2015. The arrangement was recorded as a capital lease because we retained the risks and benefits of the underlying assets. As of December 31, 2015, this capital lease has been paid in full.

NOTE O – EQUITY-BASED COMPENSATION

For the years ended December 31, 2016, 2015 and 2014, equity-based compensation expense was $2.7 million, $2.7 million and $2.6 million, respectively. We have outstanding awards granted pursuant to three shareholder approved equity-based compensation plans: the Long Term Incentive Plan (1999 Plan) the 2006 Long Term Incentive Plan (2006 Plan) and the 2014 Stock and Incentive Plan (2014 Plan). The 1999 Plan was terminated and replaced by the 2006 Plan. The 2006 Plan was terminated and replaced by the 2014 Plan. Equity-based awards outstanding under the 1999 and 2006 Plan remain in effect, but no new awards may be granted under those plans. A total of 6.3 million shares of our common stock have been reserved for issuance through the plans. Stock options and stock-settled stock appreciation rights (SARs) are generally granted with an exercise price equal to the market price of our common stock on the date of grant; the awards generally vest over four years of continuous service and have a contractual term of ten years. Grants of non-vested restricted stock awards to employees generally vest over four years of continuous service and grants to non-employee directors generally vest over one year. Certain awards provide for accelerated vesting if there is a change in control (as defined in the plans).

The recipient of a SAR is generally entitled to receive, upon exercise and without payment to us (but subject to required tax withholdings), that number of shares having an aggregate fair market value as of the date of exercise multiplied by an amount equal to the excess of the fair market value per share on the date of exercise over the fair market value per share at the date of the grant.

The fair value of stock options and SARs is estimated on the date of grant using the Black-Scholes option pricing model. Certain grants to executives require achievement of market conditions before the grant may be exercised. The fair value of awards with market exercise conditions is estimated on the date of grant using a lattice model with a Monte Carlo simulation. The fair value of all awards is amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period of four years.

Use of a valuation model requires us to make certain assumptions with respect to selected model inputs. Changes in these input variables would affect the amount of expense associated with equity-based compensation. Expected volatility is based on the historical volatility of our common shares over the expected term of the stock option or SAR. Expected term is based on historical exercise and employee termination data and represents the period of time that options and SARs are expected to be outstanding. The risk-free interest rate is based on U.S. Treasury Daily Treasury Yield Curve Rates corresponding to the expected life assumed at the date of grant. Dividend yield is zero as there are no payments of dividends made or expected. The fair value of non-vested restricted stock awards is based on the fair market value of the shares awarded at the date of grant multiplied by the number of shares awarded.

The weighted average assumptions to estimate the grant date fair value of stock options and SARs, including those with market conditions, are summarized as follows:

	Years Ended December 31,		
	2016	2015	2014
Volatility	42.4%	43.0%	57.8%
Expected term (in years)	5.4	5.5	6.2
Risk-free rate	1.40%	1.65%	1.88%
Dividend yield	0%	0%	0%

A summary of stock option and SARs activity as of and for the year ended December 31, 2016 follows (shares in thousands):

	Shares	Weighted Average Exercise Price
Outstanding, January 1, 2016	1,529	$ 8.69
Granted	966	7.11
Exercised	(238)	4.32
Forfeited or expired	(608)	9.77
Outstanding, at December 31, 2016	1,649	7.97
Exercisable at December 31, 2016	453	9.04

As of December 31, 2016, stock options and SARs are further summarized as follows (shares and dollars in thousands):

	Outstanding	Exercisable
Total shares	1,649	453
Aggregate intrinsic value	$ 562	$ 562
Weighted-average remaining contractual term (years)	7.9	4.6

The weighted average grant-date fair value of stock options and SARs granted during the years ended December 31, 2016, 2015 and 2014 was $2.85, $3.04, and $6.45, respectively.

Stock option and SARs exercise data is summarized as follows (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Options and SARs exercised	238	56	270
Net shares issued	158	51	214
Total intrinsic value exercised	$ 559	$ 195	$ 1,533
Cash received	$ 537	$ 254	$ 931
Recognized tax benefit	$ 559	$ 96	$ 1,300

Non-vested restricted stock award activity for the year ended December 31, 2016 is summarized as follows (shares in thousands):

	Shares	Weighted Average Grant Date Fair Value
Outstanding, as of January 1, 2016	538	$ 9.59
Granted	432	7.14
Vested	(168)	9.12
Forfeited	(139)	9.70
Outstanding, as of December 31, 2016	663	8.08

The total fair value of non-vested restricted shares that vested during the years ended December 31, 2016, 2015 and 2014 was $1.5 million, $2.0 million, and $1.1 million, respectively.

As of December 31, 2016, 0.7 million shares remain available for grant under the 2014 Plan. Shares available from prior plans were transferred to the successor plan. No shares remain available under any prior plans. Total unrecognized compensation costs related to all non-vested equity-based compensation arrangements was $6.2 million as of December 31, 2016 and is expected to be recognized over a weighted-average period of 1.9 years.

The Company adopted ASU No. 2016-09, *Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting,* in fiscal 2016. Under the new guidance, companies will no longer record excess tax benefits and certain tax deficiencies in additional paid-in capital. Instead, all excess tax benefits and tax deficiencies should be recognized as income tax expense or benefit in the income statement, and additional paid-in capital pools will be eliminated. The guidance requires companies to present excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity. See Footnote K - Income Taxes.

Prior to the adoption of ASU No. 2016-09, cash flows resulting from the tax benefits generated by tax deductions in excess of the compensation cost recognized for those options (excess tax benefits) are classified as financing cash flows. During the year ended and 2014, the Company realized tax benefits from stock options generated in previous and current periods resulting in approximately $82,000 of gross excess tax benefits which are included within equity-based compensation activity, net, as a component of cash flows from financing activities in the accompanying 2014 consolidated statement of cash flows.

NOTE P – OTHER INCOME, NET

Other income, net includes $1.1 million for the year ended December 31, 2014 for a pre-tax gain on the sale of a cost method investment in a privately-held business. The carrying value of our investment was $0.2 million and we sold it for proceeds of $1.3 million.

NOTE Q – SIGNIFICANT CUSTOMERS AND SUPPLIERS, CONCENTRATION OF CREDIT RISK AND RELATED PARTIES

One hardware customer accounted for 0.5%, 14.4% and 11.1%, or $0.3 million, $12.8 million and $13.5 million, of our consolidated revenue for the years ended December 31, 2016, 2015, and 2014, respectively. Accounts receivable from this customer was $0.4 million for the year ended December 31, 2015.

We had five suppliers from which our purchases were 76% of our hardware cost of sales, and four suppliers from which our purchases were 46% of our service cost of sales for the year ended December 31, 2016. Our accounts payable to these suppliers totaled $8.1 million at December 31, 2016.

We had five suppliers from which our purchases were 82% of our hardware cost of sales, and four suppliers from which our purchases were 70% of our service cost of sales for the year ended December 31, 2015. Our accounts payable to these suppliers totaled $4.2 million at December 31, 2015.

We had four suppliers from which our purchases were 72% of our hardware cost of sales, and four suppliers from which our purchases were 68% of our service cost of sales for the year ended December 31, 2014.

The Ryan Law Group is a related party. Mr. Andrew Ryan is a member of our Board of Directors and principal partner of The Ryan Law Group. During the years ended December 31, 2016, 2015 and 2014, The Ryan Law Group and another law firm in which Mr. Ryan was formerly a partner invoiced us for legal fees of $140,000, $429,000, and $290,000, respectively. Our accounts payable to these law firms was $15,000, and $7,000 at December 31, 2016 and 2015, respectively. In addition, a firm affiliated with a family member of our chairman of the board of directors and former chief executive officer has provided marketing services to us. Total fees invoiced were $0, $58,000, and $80,000 for each of the years ended December 31, 2016, 2015, and 2014.

NOTE R – BENEFIT PLAN

We sponsor a 401(k) savings and investment plan that covers all eligible employees of the Company and our subsidiaries. Employees are eligible for participation beginning on their first day of employment. We contribute an amount equal to 50% of the portion of the employee's elective deferral contribution that do not exceed 6% of the employee's total compensation for each payroll period in which an elective deferral is made. Our contributions are made in cash on a monthly basis. Our matching contributions are vested over a three year period at a rate of 33% per year. For the years ended December 31, 2016, 2015, and 2014, we recorded expense of $0.2 million, $0.4 million, and $0.3 million, respectively. During 2016, we discontinued our 401 (k) matching.

NOTE S – EARNINGS PER SHARE

Basic (loss) earnings per common share available to common shareholders is based on the weighted-average number of common shares outstanding excluding the dilutive impact of common stock equivalents. We compute diluted net (loss) earnings per share on the weighted-average number of common shares outstanding and dilutive potential common shares, such as dilutive outstanding equity-based compensation.

The numerator in calculating both basic and diluted (loss) income per common share for each period is the same as net (loss) income. The denominator is based on the number of common shares as shown in the following table (in thousands, except per share data):

	Years Ended December 31,		
	2016	2015	2014
(Loss) income from continuing operations	$ (24,320)	$ (19,157)	$ 2,236
Loss from discontinued operations	-	-	(492)
Net (loss) income	$ (24,320)	$ (19,157)	$ 1,744
Common Shares:			
Weighted average common shares outstanding	19,493	19,117	18,922
Dilutive effect of common stock equivalents	-	-	346
Total	19,493	19,117	19,268
Basic (loss) earnings per share:			
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12
Loss from discontinued operations	-	-	(0.03)
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09
Diluted (loss) earnings per share:			
(Loss) income from continuing operations	$ (1.25)	$ (1.00)	$ 0.12
Loss from discontinued operations	-	-	(0.03)
Net (loss) income	$ (1.25)	$ (1.00)	$ 0.09

As of December 31, 2016, 2015 and 2014, 1.5 million, 1.5 million and 0.8 million, respectively of stock options, SARs and warrants were excluded from the computation of diluted earnings per share as their effect was anti-dilutive.

NOTE T – SEGMENT INFORMATION

Revenue generated from customers by geographic segment is summarized as follows:

	Years Ended December 31,		
	2016	2015	2014
U.S.	95%	96%	94%
Canada	4%	3%	4%
Others	1%	1%	2%
	100%	100%	100%

Substantially all revenue generated from outside the U.S. and Canada is invoiced and collected in U.S. dollars. As of December 31, 2016 and 2015, long-lived assets located outside of the U.S. were less than 1% of total assets.

Based on the financial data reviewed by the chief operating decision maker, our chief executive officer, we have concluded that all of our continuing operations are and continue to be a single reportable segment. All resources and operations are consolidated into a single reporting segment.

On January 10, 2017, the Board of Directors (the "Board") terminated the employment of Marc Zionts as Chief Executive Officer. Effective January 11, 2017, the Board appointed Kenneth Gayron as Interim Chief Executive Officer. As a result of these events, our Chief Operating Decision Maker has changed during the first quarter of 2017. The Company is currently evaluating the impact this change will have, if any, on our reportable segments.

NOTE U – RESTRUCTURING

In 2016, we entered into agreements to relocate our corporate headquarters. One agreement is a sublease of the office space formerly occupied by our corporate headquarters and includes all furniture and fixtures. The sublease agreement was effective August 1, 2016 and was coterminous with the prime lease agreement expiring on September 29, 2022.

During the year ended December 31, 2016, we recorded restructuring charges of $1.8 million, which includes $0.8 million related to facilities, $0.9 million in severance costs and $0.1 million related to scrap expense for inventory on a product line we will no longer continue to pursue. The restructuring charge for facilities of $0.8 million is comprised of $0.4 million for broker and other related fees and $0.4 million non-cash charge for the estimated August 1, 2016 net book value of furniture, fixtures and leasehold improvements, as well as moving costs. Our temporary new corporate headquarters office space, effective July 15, 2016, is under a one-year lease agreement.

NOTE V – SUBSEQUENT EVENTS

Departure and Appointment of Certain Officers

On January 10, 2017, the Board of Directors (the "Board") of the Company terminated the employment of Marc Zionts as Chief Executive Officer. Under the terms of his employment agreement, Mr. Zionts was required to resign as a member of the Board of Directors and comply with certain other restrictive covenants.

Effective January 11, 2017, the Board appointed Kenneth Gayron as interim Chief Executive Officer. Mr. Gayron continues to serve as Chief Financial Officer.

Effective January 11, 2017, the Board appointed Kelly Gay as Chief Operating Officer.

Effective January 13, 2017, Vincent Costello, Chief Revenue Officer, separated from the Company.

Effective March 20, 2017 Sri Ramachandran, Chief Technology Officer, separated from the Company.

Senior Subordinated Promissory Note

On March 31, 2017, the Kenneth Rainin Foundation, a California corporation, and the Company entered into a Senior Subordinated Promissory Note in the amount of $5 million, with a maturity date of April 1, 2018, and an annual interest rate of 12%, which was used to pay down the outstanding debt with Crystal. Brian Igoe, a director of the Company, has a financial and other interests in the Kenneth Rainin Foundation such that Mr. Igoe is a related party.

Crystal Financial LLC Amendment and Waiver

On March 31, 2017, we entered into an amendment to the Crystal Loan Agreement to modify the covenants related to minimum adjusted EBITDA, minimum fixed charge coverage ratio, maximum net leverage, and maximum subscriber churn. Pursuant to the terms of the amendment we are required to prepay $2.0 million of principal on June 1, 2017, unless we have entered into a sale transaction prior to that date.

NOTE W – UNAUDITED SELECTED QUARTERLY DATA

The following tables summarize selected unaudited financial data for each quarter of the years ended December 31, 2016, 2015, and 2014 (in thousands except share data):

	Quarter Ended			
	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016
Net revenues	$ 18,050	$ 17,606	$ 17,412	$ 17,577
Gross profit	9,231	8,579	8,475	7,829
Operating Loss	(1,748)	(8,086)	(2,197)	(10,771)
Loss before income taxes	(2,262)	(8,524)	(2,633)	(11,241)
Income tax (benefit) expense	64	(234)	(87)	(83)
Net loss	(2,326)	(8,290)	(2,546)	(11,158)
Basic loss per share	$ (0.12)	$ (0.43)	$ (0.13)	$ (0.57)
Diluted loss per share	(0.12)	(0.43)	(0.13)	(0.57)

	Quarter Ended			
	March 31, 2015	June 30, 2015	September 30, 2015	December 31, 2015
Net revenues	$ 21,678	$ 25,653	$ 23,334	$ 18,785
Gross profit	10,106	11,140	7,286	9,909
Operating (loss) income	(834)	583	(5,819)	(2,513)
(Loss) income before income taxes	(1,006)	410	(5,976)	(2,683)
Income tax (benefit) expense	(386)	141	10,404	(257)
Net (loss) income	(620)	269	(16,380)	(2,426)
Basic (loss) earnings per share	$ (0.03)	$ 0.01	$ (0.86)	$ (0.13)
Diluted (loss) earnings per share	(0.03)	0.01	(0.86)	(0.13)

During the quarter ended September 30, 2015, we recorded noncash impairment charges of $1.3 million for other assets affecting gross profit and $1.3 million for goodwill and other intangible assets affecting operating (loss) income. During the quarter ended December 31, 2015, we recorded additional noncash impairment charges of $1.4 million for goodwill and other intangible assets affecting operating (loss) income. See Note H – Prepaid Expenses and Other Assets and Note J – Intangible Assets.

During the quarter ended June 30, 2016, we recorded noncash impairment charges of $4.2 million for goodwill and other intangible assets affecting operating (loss) income. During the quarter ended December 31, 2016, we recorded noncash impairment charges of $7.8 million for goodwill and other intangible assets affecting operating (loss) income. See Note H – Prepaid Expenses and Other Assets and Note J – Intangible Assets.

As described in Note K – Income Taxes, during the year ended December 31, 2015, we recognized $9.9 million in deferred income tax expense to record a valuation allowance against certain deferred tax assets.

The sum of earnings per share for the four quarters may differ from the annual amounts due to the required method for calculating the weighted average shares for the respective periods.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Numerex Corp.
Atlanta, Georgia

We have audited the accompanying consolidated balance sheet of Numerex Corp. and subsidiaries (the “Company”) as of December 31, 2016, and the related consolidated statements of operations and comprehensive loss, shareholders’ equity, and cash flows for the year ended December 31, 2016. In connection with our audit of the financial statements, we have also audited the financial statement schedule listed in the index appearing under Item 15(a)(2). These financial statements and schedule are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements and schedule. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Numerex Corp. and subsidiaries at December 31, 2016, and the results of their operations and their cash flows for the year ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

Also, in our opinion, the financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 31, 2017, expressed an unqualified opinion thereon.

/s/BDO USA, LLP

Atlanta, Georgia
March 31, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Numerex Corp.
Atlanta, Georgia

We have audited Numerex Corp. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Item 9A, Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Numerex Corp. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2016, and the related consolidated statements of operations and comprehensive loss, shareholders' equity, and cash flows for the year ended December 31, 2016, and our report dated March 31, 2017 expressed an unqualified opinion thereon.

/s/BDO USA, LLP

Atlanta, Georgia
March 31, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Numerex Corp.

We have audited the accompanying consolidated balance sheet of Numerex Corp. (a Pennsylvania corporation) and subsidiaries (the "Company") as of December 31, 2015, and the related consolidated statements of operations and comprehensive (loss) income, shareholders' equity, and cash flows for each of the two years in the period ended December 31, 2015. Our audits of the basic consolidated financial statements included the financial statement schedule listed in the index appearing under Item 15(a)(2). These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Numerex Corp. and subsidiaries as of December 31, 2015, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ GRANT THORNTON LLP

Atlanta, Georgia
March 14, 2016

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

The Company has established disclosure controls and procedures that are designed to ensure that information required to be disclosed in reports filed or submitted under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and, as such, is accumulated and communicated to the Company's management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate to allow timely decisions regarding required disclosure. Management, together with our CEO and CFO, evaluated the effectiveness of the Company's disclosure controls and procedures, as defined in Rule 13a-15(e) of the Exchange Act, as of December 31, 2016. Based on their evaluation, the CEO and CFO concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management (including our Chief Executive Officer and Chief Financial Officer) to allow timely decisions regarding required disclosures. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded these disclosure controls are effective as of December 31, 2016.

Management's Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including the CEO and CFO, we conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2016 based upon Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on the assessment, management has concluded that its internal control over financial reporting was effective as of December 31, 2016 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by BDO USA, LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

In our annual report on Form 10-K for the year ended December 31, 2015 and in our quarterly reports on Form 10-Q for the periods ended March 31, 2016, June 30, 2016 and September 30, 2016, management concluded that internal controls over financial reporting were not effective as of those dates solely because of a material weakness in our internal control over financial reporting described below. A material weakness is defined as a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis.

As of December 31, 2015, we did not maintain effective monitoring and oversight of controls as it relates to the source data, assumptions and projections utilized pertaining to the evaluation process for impairment of goodwill and other intangible assets. The monitoring and oversight controls as it relates to the impairment evaluation were not performed at a level of precision to identify the errors.

As of December 31, 2015, we did not maintain effective monitoring and oversight of controls over the completeness, existence, accuracy in our accounting for capitalized internally developed software costs. Specifically, there were errors as it relates to the hours incurred and rates applied pertaining to the capitalized internally developed software calculation and the related reconciliation of this account was not performed at a level of precision to identify the errors.

During the year ended December 31, 2016, management implemented its plan to remediate the material weaknesses described above, which consisted of the following elements:

- Evaluation Process for Impairment of Goodwill and Other Intangible Assets Material Weakness:
  - Enhance the formality of rigor of review as it relates to assumptions that are utilized pertaining to the goodwill impairment evaluation process; and,
  - Perform more rigorous sensitivity analyses on financial projections and other inputs.
- Capitalized Internally Developed Software Material Weakness:
  - Implement additional monitoring controls as it relates to internal costs that are incurred and capitalized; and,
  - Implement additional monitoring controls verifying the hours and rates that are incorporated into the capitalized internally developed software calculation.

We tested and evaluated the design and operating effectiveness of the same control procedures. We have also assessed the effectiveness of the remediation plan.

As of December 31, 2016, management has determined that the material weaknesses identified have been remediated.

Other than the steps taken in implementing our remediation plan, there were no changes in our internal control over financial reporting (as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during the quarter ended December 31, 2016, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Crystal Financial LLC Amendment and Waiver

On March 31, 2017, we entered into the Third Amendment to Term Loan Agreement and Limited Waiver (the "Third Amendment") with Crystal Financial LLC (the "Term Agent"). Pursuant to the Third Amendment, the Term Agent agreed to waive certain specified events of default, including events of default arising out of our failure to meet financial covenants with respect to minimum adjusted EBITDA, minimum fixed charge ratio, maximum total net coverage, and maximum subscriber churn, as well as events of default arising out of our failure to notify the Term Agent of certain events as required under the Term Loan Agreement and to update certain schedules provided to the Term Agent. The Third Amendment also included modifications to the financial covenants under the Term Loan Agreement, effective as of the date of the amendment.

Pursuant to the Third Amendment, we were required to prepay $5,000,000 of the principal outstanding under the Term Loan Agreement, and we agreed to pay the Term Agent an additional $2,000,000 of principal on June 1, 2017 unless we have entered into a sale transaction prior to that date. In connection with the Third Amendment, we agreed to pay to the Term Agent an amendment fee of $200,000, $100,000 of which was paid on the date of the amendment and the remainder of which is payable on June 1, 2017 unless we complete a sale or refinancing transaction before that date. The Third Amendment further provides that, by June 1, 2017, we must either enter into a sale agreement or a binding commitment letter to refinance our obligations under the Term Loan Agreement, or engage an investment banker reasonably acceptable to the Term Agent to advise and assist us in entering into a sale or refinancing transaction.

The foregoing summary of the terms and conditions of the Third Amendment does not purport to be complete and is qualified in its entirety by reference to the Third Amendment, a copy of which will be filed as an exhibit to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2017.

Senior Subordinated Promissory Note

On March 31, 2017, Kenneth Rainin Foundation, a California corporation, and the Company entered into a Senior Subordinated Promissory Note in the amount of $5 ,000,000, with a maturity date of April 1, 2018, and an annual interest rate of 12%, which was used to pay down $5,000,0000 of the principal outstanding under the Term Loan Agreement, and issued to Kenneth Rainin Foundation a warrant to purchase 125,000 shares of our common stock at a warrant price of $0.01 per share. Brian Igoe, a director of the Company, is the Chief Investment Officer of the Kenneth Rainin Foundation and therefore Mr. Igoe is a related party.

PART III

Item 10. Directors, Executive Officers of the Registrant and Corporate Governance

Except as set forth above under "Business - Executive Officers of the Registrant," the information required by Item 10 of Form 10-K is incorporated by reference from the Company's Proxy Statement relating to the 2016 Annual Meeting of Shareholders to be filed pursuant to General Instruction G (3) to Form 10-K. Also incorporated by reference is the information under the caption "Section 16(a) Beneficial Ownership Reporting Compliance."

Item 11. Executive Compensation.

Incorporated by reference from our Proxy Statement relating to the 2016 Annual Meeting of Shareholders to be filed pursuant to General Instruction G (3) to Form 10-K.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by Item 12 of Form 10-K is incorporated by reference from our Company's Proxy Statement relating to the 2016 Annual Meeting of Shareholders to be filed pursuant to General Instruction G (3) to Form 10-K.

Item 13. Certain Relationships and Related Transactions and Director Independence.

Incorporated by reference from our Proxy Statement relating to the 2016 Annual Meeting of Shareholders to be filed pursuant to General Instruction G (3) to Form 10-K.

Item 14. Principal Accounting Fees and Services

Incorporated by reference from our Proxy Statement relating to the 2016 Annual Meeting of Shareholders to be filed pursuant to General Instruction G (3) to Form 10-K.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) Documents filed as part of this report:

1. Consolidated Financial Statements. All financial statements of the Company as described in Item I of this report on Form 10-K. The consolidated financial statements required to be filed hereunder are listed in the Index to Consolidated Financial Statements on page 44 of this report.

2. Financial statement schedule included in Part IV of this Form:

    Schedule II - Valuation and qualifying accounts

3. The following exhibits are filed as part of this report:

Exhibit Number	Description
3.1 [1]	Amended and Restated Articles of Incorporation of the Company
3.2 [1]	Bylaws of the Company
4.1	Warrant to Purchase Stock issued to Kenneth Rainin Foundation
10. 1 [2]	Registration Agreement between the Company and Dominion dated July 13, 1994
10. 2 [3]	Letter Agreement between the Company and Dominion (now Gwynedd) dated October 15, 1994, re: designation of director
10. 3 [4]	2006 Long-Term Incentive Plan (2006 Plan)*
10. 4 [5]	2014 Stock and Incentive Plan (2014 Plan)*

10. 6 [6]	Form of Change in Control Agreement dated August 5, 2014*
10. 7 [6]	Form of Stock Option Agreement under 2014 Equity and Incentive Plan*
10. 8 [6]	Form of Restricted Stock Unit Grant Notice and Agreement*
10. 9 [7]	Marc Zionts employment agreement*
10. 11 [7]	Stratton Nicolaides Employment Agreement dated November 4, 2015*
10. 13 [7]	Shu Gan Offer Letter for Employment dated September 22, 2015*
10.15	Sridhar Ramachandran Offer Letter for Employment dated November 20, 2015*
10.16	Kenneth Gayron Offer Letter for Employment dated November 24, 2015*
10.17	Kelly Gay Offer Letter for Employment January 11, 2017
10.18	Kelly Gay Severance and Change in Control Agreement dated March 6, 2017
10.19	Shu Gan Severance and Change in Control Agreement dated March 2, 2016
10.20	Ken Gayron Severance and Change in Control Agreement dated March 17, 2016
10. 21 [8]	Term Loan Agreement dated as of March 9, 2016 by and among Numerex Corp., the other parties thereto designated as Borrowers and Guarantors, and Crystal Finance LLC, as Term Agent
10. 22 [9]	First Amendment to Term Loan Agreement dated July 29, 2016 by and among Numerex Corp., the other parties thereto designated as Borrowers and Guarantors, and Crystal Finance LLC, as Term Agent
10.23 [10]	Second Amendment to Term Loan Agreement dated November 3, 2016 by and among Numerex Corp., the other parties thereto designated as Borrowers and Guarantors, and Crystal Finance LLC, as Term Agent
10.25	Senior Subordinated Promissory Note dated March 31, 2017, issued by Numerex Corp. to Kenneth Rainin Foundation
21.1	Subsidiaries of Numerex Corp.
23.1	Consent of BDO USA, LLP
23.2	Consent of Grant Thornton, LLP
24.1	Power of Attorney (included with signature page)
31.1	Rule 13a-14(a) Certification of Chief Executive Officer
31.2	Rule 13a-14(a) Certification of Chief Financial Officer
32.1	Rule 13a-14(b) Certification of Chief Executive Officer
32.2	Rule 13a-14(b) Certification of Chief Financial Officer
101	Interactive Data Files - The following financial information from Numerex Corp. Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 19, 2017, formatted in XBRL includes: (i) Consolidated Balance Sheets at December 31, 2016 and December 31, 2015, (ii) Consolidated Statements Operations for the fiscal periods ended December 31, 2016, 2015 and 2014, (iii) Consolidated Statements of Cash Flows for the fiscal periods ended December 31, 2016, 2015 and 2014, (iv) Consolidated Statement of Shareholders' Equity and Comprehensive (Loss) Income for the fiscal period ended December 31, 2016, and (v) the Notes to Consolidated Financial Statements.**

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* Indicates a management contract of any compensatory plan, contract or arrangement.

** This exhibit is furnished and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (15 U.S.C. 78r), or otherwise subject to the liability of that section. Such exhibit will not be deemed to be incorporated by reference into any filing under the Securities Act or Securities Exchange Act, except to the extent that the Registrant specifically incorporates it by reference.

1 Incorporated by reference to the Exhibits filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission for the year ended October 31, 1995 (File No. 000-22920)

2 Incorporated by reference to the Exhibit filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 20, 1994 (File No. 000-22920)

3 Incorporated by reference to the Exhibits filed with the Company's Registration Statement on Form S-1 filed with the Securities and Exchange Commission (File No. 33-89794)

4 Incorporated by reference to the Exhibits filed with the Company's Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on April 10, 2006 (File No. 000-22920)

5 Incorporated by reference to Exhibit filed with the Company's Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on April 2, 2014 (File No. 000-22920)

6 Incorporated by reference to Exhibit 10.1 filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 9, 2014 (File No. 000-22920)

7 Incorporated by reference to Exhibits filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on August 5, 2014 (File No. 000-22920)

8 Incorporated by reference to Exhibits filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 10, 2016 (File No. 000-22920)

9 Incorporated by reference to Exhibits filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 4, 2016 (File No. 000-22920)

10 Incorporated by reference to Exhibits filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 7, 2016 (File No. 000-22920)

Item 16. Form 10-K Summary

None

SCHEDULE II

NUMEREX CORP.
VALUATION AND QUALIFYING ACCOUNTS
Years ended December 31, 2016, 2015, and 2014
(in thousands)

Description	Balance at beginning of Period	Additions charged to expense	Deductions	Balance at end of Period
Year ended December 31, 2016:				
Accounts and financing receivables				
Allowance for uncollectible accounts	$ 618	$ 434	(285) [a]	$ 767
Inventory				
Reserve for obsolescence	2,706	541	(801) [c]	2,446
Deferred tax assets				
Valuation allowance	16,417	8,205	-	24,622
Year ended December 31, 2015:				
Accounts and financing receivables				
Allowance for uncollectible accounts	$ 652	$ 562	(596) [a]	$ 618
Inventory				
Reserve for obsolescence	1,397	1,343	(34) [c]	2,706
Deferred tax assets				
Valuation allowance	3,108	13,309	-	16,417
Year ended December 31, 2014:				
Accounts and financing receivables				
Allowance for uncollectible accounts, continuing operations	380	392	(120) [a]	652
Allowance for uncollectible accounts, discontinued operations	600	-	(600) [b]	-
Inventory				
Reserve for obsolescence, continuing operations	1,110	544	(257) [c]	1,397
Reserve for obsolescence, discontinued operations	30	-	(30) [c]	-
Deferred tax assets				
Valuation allowance, continuing operations	1,545	1,563	-	3,108
Valuation allowance, discontinued operations	462	-	(462) [d]	-

[a] Amounts written off as uncollectible, net of recoveries
[b] Amounts written off as uncollectible, net of recoveries and reclassification to discontinued operations
[c] Amounts written off as disposals
[d] Reclassification to discontinued operations

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NUMEREX CORP .

By *:* */s/ Kenneth L. Gayron*
Kenneth L. Gayron
Interim Chief Executive Officer
Date: March 31, 2017

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kenneth Gayron and Andrew Ryan and each of them, as his true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Stratton J. Nicolaides Stratton J. Nicolaides	Non-Executive Chairman of the Board of Directors	March 31, 2017
/s/ Kenneth L. Gayron Kenneth L. Gayron	Interim Chief Executive Officer, Chief Financial Officer, Principal Financial and Accounting Officer	March 31, 2017
/s/ Eric Singer Eric Singer	Director	March 31, 2017
/s/ Tony G. Holcombe Tony G. Holcombe	Director	March 31, 2017
/s/ Sherrie G. McAvoy Sherrie G. McAvoy	Director	March 31, 2017
/s/ Jerry A. Rose Jerry A. Rose	Director	March 31, 2017
/s/ Andrew J. Ryan Andrew J. Ryan	Director	March 31, 2017
/s/ Brian R. Igoe Brian R. Igoe	Director	March 31, 2017

Exhibit 4.1

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE " **ACT** "), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company:	NUMEREX CORP., a Pennsylvania corporation
Number of Shares:	125,000
Type/Series of Stock:	Common Stock
Warrant Price:	$.01 per share
Issue Date:	March 31, 2017
Expiration Date:	March 31, 2027 See also Section 5.1(b)

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, KENNETH RAININ FOUNDATION (" **KRF** " and, together with any successor or permitted assignee or transferee of this Warrant, " **Holder** ") is entitled to purchase the number of fully paid and non-assessable shares (the " **Shares** ") of the above-stated Type/Series of Stock (the " **Class** ") of the above-named company (the " **Company** ") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant.

SECTION 1. EXERCISE.

1.1 Method of Exercise . Holder may at any time and from time to time exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise . On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

$$X = Y(A-B)/A$$

where:

X = the number of Shares to be issued to the Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value . If the Company's common stock is then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a " **Trading Market** ") and the Class is common stock, the fair market value of a Share shall be the closing price or last sale price of a share of common stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If the Company's common stock is not traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant . Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver to Holder a certificate representing the Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant . On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company .

(a) Acquisition . For the purpose of this Warrant, " **Acquisition** " means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license, or other disposition of all or substantially all of the assets of the Company (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization (or, if the Company's stockholders beneficially own a majority of the outstanding voting power of the surviving or successor entity as of immediately after such merger, consolidation or reorganization, such surviving or successor entity is not the Company);

or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company's then-total outstanding combined voting power.

(b) Treatment of Warrant at Acquisition . In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a " **Cash/Public Acquisition** "), either (i) Holder shall exercise this Warrant pursuant to Section 1.1 and/or 1.2 and such exercise will be deemed effective immediately prior to and contingent upon the consummation of such Acquisition or (ii) if Holder elects not to exercise the Warrant, this Warrant will expire immediately prior to the consummation of such Acquisition.

(c) The Company shall provide Holder with written notice of any proposed Cash/Public Acquisition (together with such reasonable information as Holder may reasonably require regarding the treatment of this Warrant in connection with such contemplated Cash/Public Acquisition giving rise to such notice), which is to be delivered to Holder not less than seven (7) Business Days prior to the closing of the proposed Cash/Public Acquisition. In the event the Company does not provide such notice, then if, immediately prior to the Cash/Public Acquisition, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon such exercise to the Holder and Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as the date thereof.

(d) Upon the closing of any Acquisition other than a Cash/Public Acquisition defined above, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(e) As used in this Warrant, " **Marketable Securities** " means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the " **Exchange Act** "), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in a Trading Market, and (iii) following the closing of such Acquisition, Holder would not be restricted from publicly re-selling all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise or convert this Warrant in full on or prior to the closing of such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

1.7 Registration Right. The Company shall use commercially reasonable efforts to prepare and file with the Securities and Exchange Commission, as promptly as practicable following the Issue Date of this Warrant and in any event within 90 calendar days of the Issue Date, a registration statement covering the Shares for an offering to be made on a continuous basis pursuant to Rule 415 or any successor rule thereto. The registration statement shall be on Form S-3 or, if the Company is not so eligible, on Form S-1 or another appropriate form in accordance herewith and shall contain the "Plan of Distribution" in substantially the form provided by the Holder. The Company shall use commercially reasonable efforts to cause the registration statement to become effective and remain effective until all Shares covered by such registration statement have been sold, or may be sold without the requirement to be in compliance with Rule 144(c)(1) and otherwise without restriction or limitation pursuant to Rule 144, as determined by the counsel to the Company. The Company shall bear all fees and expenses attendant to the registration of the Shares pursuant to this Section.

SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in common stock or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) All Shares which may be issued upon the exercise of this Warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class, common stock and other securities as will be sufficient to permit the exercise in full of this Warrant and the conversion of the Shares into common stock or such other securities.

(b) The Company is a corporation duly incorporated, validly existing and subsisting under the laws of the Commonwealth of Pennsylvania.

(c) The Company has the requisite power and authority to execute and deliver this Warrant and to perform its obligations hereunder.

(d) The execution and delivery of this Warrant by the Company and the performance of its obligations hereunder have been duly authorized by all necessary corporate action. The Company has duly executed and delivered this Warrant.

(e) The Company acknowledges that one of the members of the Company's Board of Directors has a financial or other interest in KRF such that he could be considered an interested director for purposes of Section 1728 of the Business Corporation Law of 1988 of the Commonwealth of Pennsylvania ("Section 1728") with respect to transactions contemplated by this Warrant. Accordingly, the Company represents and warrants that the terms of this Warrant and the transactions contemplated hereby have been negotiated between the Company and KRF on an arms' length basis and have been approved by the Company's Board of Directors in accordance with the standards and procedures set forth in Section 1728.

(f) No consent or authorization of, filing with, notice to or other act by, or in respect of, any Governmental Authority or any other person is required in order for the Company to execute, deliver, or perform any of its obligations under this Warrant except for such notices that have been provided on or prior to the date hereof.

(g) The execution and delivery of this Warrant and the consummation by the Company of the transactions contemplated hereby do not and will not (i) violate any provision of the Company's organizational documents; (ii) violate any Law or Order applicable to the Company or by which any of its properties or assets may be bound; or (iii) constitute a default under any material agreement or contract by which the Company may be bound.

(h) This Warrant is a valid, legal and binding obligation of the Company, enforceable against the Company in accordance with its terms except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally and by general equitable principles (whether enforcement is sought by proceedings in equity or at law).

For purposes of this Warrant:

(1) "Governmental Authority" means the government of any nation or any political subdivision thereof, whether at the national, state, territorial, provincial, municipal or any other level, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of, or pertaining to, government (including any supranational bodies such as the European Union or the European Central Bank);

(2) "Law" means any law (including common law), statute, ordinance, treaty, rule, regulation, policy or requirement of any Governmental Authority and authoritative interpretations thereon; and

(3) "Order" means any order, decree, judgment, writ, injunction, settlement agreement, requirement or determination of an arbitrator or a court or other Governmental Authority.

3.2 <u>Notice of Certain Events</u> . If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class or common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up;

then, in connection with each such event, the Company shall give Holder:

(1) at least seven (7) Business Days prior written notice of the date on which a record will be taken for such dividend, distribution, or subscription rights (and specifying the date on which the holders of outstanding shares of the Class will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) and (b) above; and

(2) in the case of the matters referred to in (c) and (d) above at least seven (7) Business Days prior written notice of the date when the same will take place (and specifying the date on which the holders of outstanding shares of the Class will be entitled to exchange their shares for the securities or other property deliverable upon the occurrence of such event).

Reference is made to Section 1.6(c) whereby this Warrant will be deemed to be exercised pursuant to Section 1.2 hereof if the Company does not give written notice to Holder of a Cash/Public Acquisition as required by the terms hereof. Company will also provide information requested by Holder that is reasonably necessary to enable Holder to comply with Holder's accounting or reporting requirements.

SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account . This Warrant and the Shares issuable upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information . Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience . Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that the Warrant and the Shares issuable upon exercise hereof have not been registered under the Act or qualified under the securities laws of any state and, except as set forth in Sections 5.3 and 5.4 below, may not be offered, sold, pledged or otherwise transferred unless a registration statement covering the securities under the Act is in effect or unless an exemption from such registration and qualification are otherwise available and that it may be required to hold such securities for an indefinite period or until it is eligible to resell such securities under Rule 144 promulgated under the Act. The Holder also understands that any sale of (A) its rights hereunder to purchase Common Stock or (B) Common Stock issued or issuable hereunder which might be made by it in reliance upon Rule 144 promulgated under the Act may be made only in accordance with the terms and conditions of that Rule.

4.6 No Voting Rights. Holder, as a Holder of this Warrant, will not have any voting rights until the exercise of this Warrant.

SECTION 5. MISCELLANEOUS.

5.1 Term; Automatic Cashless Exercise Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Eastern time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares (or such other securities) issued upon such exercise to Holder.

5.2 Legends. Each certificate evidencing Shares (and each certificate evidencing the securities issued upon conversion of any Shares, if any) shall be imprinted with an appropriate restrictive legend, except that such certificate shall not bear such restrictive legend if (a) in the opinion of counsel for the Company such legend is not required in order to establish compliance with any provisions of the Act, (b) such Shares are eligible for resale without restriction under, or continued compliance with any provision of, Rule 144 promulgated under the Act, or (c) such Shares have been resold under an effective registration statement. Any restrictive legends on the Shares may be removed at the request of the Holder thereof if any of the conditions set forth in clauses (a), (b) or (c) have been met.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issued upon exercise of this Warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder, provided that any such transferee is an "accredited investor" as defined in Regulation D promulgated under the Act. Additionally, the Company shall also not require an opinion of counsel if there is no material question as to the availability of Rule 144 promulgated under the Act.

5.4 Transfer Procedure. After receipt by KRF of the executed Warrant, KRF may transfer all or part of this Warrant to one or more of KRF's affiliates (each, an " **KRF Affiliate** "), by execution of an Assignment substantially in the form of Appendix 2. Subject to the provisions of Article 5.3 and upon providing the Company with written notice, KRF, any such KRF Affiliate and any subsequent Holder, may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant (or the Shares issuable directly or indirectly, upon conversion of the Shares, if any) to any other transferee, provided, however, in connection with any such transfer, the KRF Affiliate(s) or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable).

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

KENNETH RAININ FOUNDATION
155 Grand Avenue, Suite 1000
Oakland, CA 94612
Attn: Jose Flores

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

NUMEREX CORP.
400 Interstate North Pkwy, Suite 1350
Atlanta, GA 30339
Attn: Kenneth Gayron
Telephone: 800-665-5686
Facsimile: (770) 693-5950

With a copy (which shall not constitute notice) to:

ARNOLD & PORTER KAYE SCHOLER LLP
601 Massachusetts Ave, NW
Washington, DC 20001
Attn: Richard E. Baltz
Telephone: (202) 942-5124
Facsimile: (202) 942-5999
Email: richard.baltz@apks.com

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.9 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of New York, without giving effect to its principles regarding conflicts of law.

5.10 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.11 Business Days. "**Business Day**" is any day that is not a Saturday, Sunday or a day on which banks in California are closed.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

NUMEREX CORP.

By: ______________________________

Name: ______________________________
(Print)

Title: ______________________________

[Signature Page to Warrant to Purchase Stock]

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right to purchase ___________ shares of the Common Stock of NUMEREX CORP. (the " **Company** ") in accordance with the attached Warrant To Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

☐ check in the amount of $________ payable to order of the Company enclosed herewith

☐ Wire transfer of immediately available funds to the Company's account

☐ Cashless Exercise pursuant to Section 1.2 of the Warrant

☐ Other [Describe] ____

2. Please issue a certificate or certificates representing the Shares in the name specified below:

____
Holder's Name

____

____
(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in Section 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

By: __________________________

Name: __________________________

Title: __________________________

Date: __________________________

APPENDIX 2

ASSIGNMENT

For value received, Kenneth Rainin Foundation hereby sells, assigns and transfers unto

Name: [KRF TRANSFEREE]

Address:_________________________

Tax ID: ___________________________

that certain Warrant to Purchase Stock issued by NUMEREX CORP. (the " **Company** "), on ______ ___, 20__ (the " **Warrant** ") together with all rights, title and interest therein.

KENNETH RAININ FOUNDATION

By: ______________________________

Name: ______________________________

Title: ______________________________

Date:____________________________________

By its execution below, and for the benefit of the Company, [KRF TRANSFEREE] makes each of the representations and warranties set forth in Article 4 of the Warrant and agrees to all other provisions of the Warrant as of the date hereof.

[KRF TRANSFEREE]

By: ______________________________

Name: ______________________________

Title: ______________________________

Exhibit 10.17

Numerex

January 11, 2017

Mrs. Kelly Gay
3374 Habersham Road NW
Atlanta, GA 30305

Dear Kelly,

We are pleased that you have accepted our offer as Chief Operating Officer with Numerex reporting to the Chief Executive Officer.

Ken will establish specific short and longer-term goals with you. Aside from your specific job requirements, you will be expected to contribute to our overall business and cultural growth by, among other things, helping colleagues achieve their goals and contributing to the development of company-wide intellectual capital.

We have developed a competitive compensation package commensurate with your extensive experience and abilities.

Base Pay

You will earn base pay at an annualized pre-tax rate of $330,000 payable twice a month.

Bonus

You will participate in our Executive Bonus Plan with an annual bonus targeted at 50% of base pay. For 2017, the bonus will depend on Numerex's achievement of certain financial targets that the board will establish.

Equity

As you know, the Board has approved the grant of 25,000 stock options and 25,000 Restricted Share Units under Numerex's current standard vesting terms: 25%/year over four years. Vesting is accelerated upon the occurrence of a Change-in-Control.

In addition, you will be eligible for annual equity grants with a targeted present value equal to 50% of your base pay. These grants are usually made on or around our annual shareholder's meeting held in the spring.

No equity is granted until approved by the Compensation Committee.

Associate Benefits

You will be entitled to the benefits generally provided to Numerex associates. Numerex currently offers medical, dental, vision, 401(k), paid-time-off and life insurance plans.

You will accrue 15 days of vacation per year, have two elective holidays which can be taken at any time, and be able to take up to seven paid days off in the event of illness. This is in addition to the standard Company-wide holidays (e.g., Thanksgiving, Christmas).

SEVERANCE AND CHANGE IN CONTROL

Management will recommend to the Compensation Committee that Numerex enter into a severance and change in control agreement with you with the following key terms:

- 12 months of base pay in the event you are terminated by Numerex or any successor organization without Cause or resign for Good Reason.
- All outstanding equity grants will be vested in the event of a change-in-control.

COMPANY POLICIES AND EMPLOYMENT REQUIREMENTS

At Numerex, we expect that you will maintain all information about its operations, customers, and associates as confidential and, in the event that you leave Numerex, refrain from competition with the firm.

As a condition of your continued employment, you are required to sign the attached Business Protection Agreement. Employment is further contingent upon demonstrating you have the legal right to work in the United States without sponsorship by Numerex, by passing a satisfactory background and/or reference check. The background check may include a review of your credit history.

Please email a signed copy of this offer letter and Business Protection Agreement to me at ahobbs@numerex.com .

This letter covers all the principal aspects of our offer and does not create a contract of employment or a contract for benefits. Your employment relationship with the Company is at-will. At either your option or the Company's option, your employment may be terminated at any time, with or without cause or notice.

Kelly, we are excited about your decision to rejoin Numerex and helping us continue our growth; your experience, track record of success and integrity is a wonderful fit with our culture.

Please feel free to contact me if you have any questions or would like to discuss any aspect of this offer.

SIGNATURE PAGE TO FOLLOW

Sincerely,

Eugene Hyun
SVP, Legal Affairs and Administration

Accepted:

SIGNATURE:	**DATE:**

Mrs. Kelly Gay

Business Protection Agreement

This Business Protection Agreement (this "Agreement") is made January 11, 2017 between Numerex Corp. and its affiliates and subsidiaries (collectively, the "Company") and Kelly Gay (the "Employee").

STATEMENT OF FACTS

A. The Company is headquartered in Georgia and provides wireless services, technology and products for the development and support of machine-to-machine solutions for businesses and governments worldwide.

B. Employee has been and/or will be in a position of trust and responsibility with access to Confidential Information, Trade Secrets, and information concerning the Company's employees, customers, and prospective customers. The Company wishes to protect and maintain this information, which may be developed by or become known to Employee and which, if disclosed to the Company's competitors or if used in a competitive way, would be detrimental to the Company's business.

C. Employee has and/or will perform the duties of a key employee or of a professional for the Company.

D. The Company will invest its time and money in the development of Employee's skills in the Company's Business.

E. The Employee is an employee-at-will of the Company and therefore, the Company or the Employee can terminate the employment relationship at any time for any reason.

AGREEMENT AS TO TERMS

In consideration of the employment of Employee by the Company, the parties agree as follows:

1. Definitions.

Capitalized terms used in this Agreement shall have the meanings set forth in Schedule 1 .

2. Agreement Not to Solicit Employees.

During the term of Employee's employment by the Company and for a period of one (1) year following the termination of such employment, regardless of the reason for or manner of termination, Employee shall not, either directly or indirectly, on Employee's own behalf or on behalf of others, solicit, divert or hire away, or attempt to solicit, divert or hire away, any person employed by the Company, regardless if such employee is a full-time, part-time or temporary employee of the Company.

3. Agreement Not to Solicit Customers.

During the term of Employee's employment by the Company and for a period of one (1) year following the termination of such employment, regardless of the reason for or manner of termination, Employee shall not, either directly or indirectly, on Employee's own behalf or on the behalf of others, solicit, divert or appropriate, or attempt to solicit, divert or appropriate, any customer or actively sought prospective customer of the Company with whom the Employee had Material Contact during the last twelve (12) months of Employee's employment with the Company for the purpose of providing Competitive Products and Services.

4. Non-Competition.

During the term of Employee's employment by the Company and for a period of one (1) year following the termination of such employment, regardless of the reason for or manner of termination, Employee shall not, within the Area, either directly or indirectly, perform or undertake any duty or responsibility substantially similar to any duty or responsibility Employee performed for the Company in the service of or on behalf of any person, firm, partnership, corporation or unincorporated association or entity of any kind (including Employee) that is engaged in Competitive Activities.

5. Restrictions on Use and Disclosure of Company Information.

(a) Employee agrees that:

i. Employee will receive and hold all the Company Information in trust and in strictest confidence;

ii. Employee will protect the Company Information from disclosure and will in no event take any action causing any of the Company Information to lose its character as Company Information, or fail to take the action necessary in order to prevent any Company Information from losing its status as Company Information; and

iii. except as required by Employee's duties in the course of employment by the Company, Employee will not, directly or indirectly, use, publish, disseminate or otherwise disclose any Company Information to any third party without the prior written consent of the Company, which may be withheld in the Company's absolute discretion.

(b) The restrictions on Employee's use or disclosure of Company Information, as set forth in Section 5(a) above, shall survive, with respect to Confidential Information, for as long as the information meets the definition of Confidential Information in this Agreement.

(c) The restrictions on Employee's use or disclosure of Company Information, as set forth in Section 5(a) above, shall survive, with respect to Trade Secrets, for so long as such Company Information is a trade secret under applicable law.

(d) Upon termination of Employee's employment with the Company, or at any time upon the Company's request, Employee shall immediately return all Company Information to the Company and shall not retain any copies or derivatives thereof.

6. Assignment of Inventions and Works.

(a) During the period of Employee's employment, Employee agrees to promptly disclose in confidence to the Company all inventions and original works of authorship that Employee makes or conceives or first reduces to practice or creates, either alone or jointly with others, whether or not in the course of Employee's employment, and whether or not such Inventions and Works are patentable, copyrightable or protectable as trade secrets.

(b) Employee understands that, under the copyright laws, any copyrightable Works prepared by Employee within the course and scope of his employment are "works for hire". Consequently, the Company will be considered the author and owner of such Works.

(c) Employee agrees that all Inventions that (a) are or have been developed using equipment, supplies, facilities, Confidential Information or Trade Secrets of the Company, (b) result from work performed by Employee for the Company, or (c) relate to the Company's Business, will be the sole and exclusive property of the Company.

(d) Assignment of Inventions . Employee hereby irrevocably and unconditionally transfers, conveys, assigns and delivers to the Company all Employee's worldwide right, title and interest in any and all Inventions and any other forms of intellectual property.

(e) Assignment of Works . Employee hereby irrevocably and unconditionally transfers, conveys, assigns and delivers to the Company all Employee's entire worldwide right, title and interest in and to the copyright and all other rights in the Works, and any and all copyright registrations and registration applications thereof anywhere in the world, and any renewals and extensions of such copyright registrations, including, but not limited to, the following rights: (i) to reproduce the Works in copies, (ii) to prepare derivative works of the Works, (iii) to perform the Works (as appropriate), and (iv) to distribute copies of the Works to the public by sale or other transfer of ownership or by rental, lease, or lending, to the full end of the term for which the copyright is granted, as fully and entirely as the same would have been held by Employee had this assignment not been made.

(f) Employee also waives and agrees never to assert against the Company or any third party any "Moral Rights" Employee might have in or with respect to any Works even after Employee leave the Company. Moral Rights means any right (or similar right existing under the judicial or statutory law of any country or treaty) to claim authorship of any Works, to object or prevent modification of any Works, or to withdraw from circulation or to control the publication or distribution of any Works.

(g) Employee agrees to assist the Company in every way to obtain and enforce the intellectual property protection for any Works or Inventions in any and all countries. Employee agrees to sign documents and take such actions that the Company may reasonably request to obtain such protection.

(h) Employee's obligations to assist Company under Section 6(g) will continue after Employee leaves the Company. The Company will reimburse Employee at a reasonable rate after Employee leaves the Company for time or expenses actually spent by Employee on the Company's behalf.

(i) Employee further authorizes and grants a limited power of attorney to the Company's counsel or other designee, to execute on Employee's behalf any documents necessary to evidence the assignments granted herein for the United States or any other country without further notice to Employee.

7. Ability to Earn Livelihood.

Employee expressly agrees and acknowledges that the covenants and restrictions contained in Sections 2 , 3 , 4 , and 5 do not preclude Employee from earning a livelihood, nor do they unreasonably impose limitations on Employee's ability to earn a living. In addition, Employee agrees and acknowledges that the potential harm to the Company of their non-enforcement outweighs any harm to the Employee of their enforcement by injunction or otherwise.

8. No conflict; No Unauthorized Use.

Employee represents and warrants to the Company that Employee is not now under any obligation, of a contractual nature or otherwise, to any person, firm, corporation, association or other entity that is inconsistent or in conflict with this Agreement or which would prevent, limit or impair in any way the performance by Employee of services to the Company in the course of his or her employment. Employee agrees that Employee will not use, disclose, or reverse engineer (a) any confidential information or trade secrets of any former employer or third party, or (b) any works of authorship developed in whole or in part by Employee during any former employment or for any other party, unless authorized in writing by the former employer or third party.

9. Remedies.

Employee agrees that the covenants contained in Sections 2 , 3 , 4 , and 5 of this Agreement are of the essence of this Agreement; that each of such covenants is reasonable and necessary to protect and preserve the business, interests and properties of the Company; and that irreparable loss and damage will be suffered by the Company should Employee breach any of such covenants. Therefore, Employee agrees and consents that, in addition to all the remedies provided at law or in equity, the Company shall be entitled to a temporary restraining order and temporary and permanent injunctions to prevent a breach or contemplated breach of any of such covenants. The existence of any claim, demand, action or cause of action of Employee against the Company shall not constitute a defense to the enforcement by the Company of any of the covenants or agreements herein.

10. Severability.

The parties agree that each provision in this Agreement is separate, distinct and severable from the other and remaining provisions of this Agreement, and that the invalidity or unenforceability of any provision shall not affect the validity and enforceability of any other provision or provisions of this Agreement. Further, if any provision of this Agreement is ruled invalid or unenforceable by a court of competent jurisdiction because of a conflict between such provision and any applicable law or public policy, such provision shall be valid and enforceable to the extent such provision is consistent with such law or public policy.

11. Blue Pencil.

If any court of competent jurisdiction shall at any time deem any provisions of Sections 2 , 3 , 4 , or 5 to be unenforceable, the parties agree that the Court shall modify the provision to render it enforceable so long as such modification does not render the provision more restrictive with regard to Employee than as originally drafted by the parties.

12. Assignment.

This Agreement and the rights and obligations of the Company hereunder may be assigned by the Company and shall inure to the benefit of, shall be binding upon, and shall be enforceable by any such assignee and any successor of the Company. This Agreement and the rights and obligations of Employee hereunder may not be assigned by Employee.

13. Governing Law.

This Agreement shall be governed and construed as to both substantive and procedural matters in accordance with the laws of the State of Georgia, without regard to the conflict of laws principles thereof.

14. Consent to Jurisdiction and Venue and Selection of Forum.

In regard to any action to enforce or interpret this Agreement, or otherwise arising out of or relating to this Agreement, each party (i) consents and submits to personal jurisdiction and venue in the Superior Court of Cobb County, Georgia or the United States District Court for the Northern District of Georgia, Atlanta Division (referred to as the "Court"); (ii) waives any and all objections to jurisdiction and venue in the Court; and (iii) waives any objection that the Court is an inconvenient forum. Each party further agrees that jurisdiction and venue concerning any legal or equitable action to enforce or interpret this Agreement, or otherwise arising out of this Agreement, shall rest exclusively in the Court, so that any such action shall be brought and defended in the Court. Each party consents to service of process in any such action by U.S. Mail or other commercially reasonable means of receipted delivery.
Initials: _________ Initials: _________

15. Reasonableness.

Employee acknowledges that Employee has carefully read this Agreement and has given careful consideration to the restraints imposed upon the Employee by this Agreement, and is in full accord as to their necessity for the reasonable and proper protection of the Company Information. The Employee expressly acknowledges and agrees that each and every restraint imposed by this Agreement is reasonable with respect to subject matter, time period and geographical area.

16. Modification.

No amendment or modification of this Agreement shall be valid or binding upon the Company or Employee unless made in writing and signed by the parties hereto. Notwithstanding the foregoing, the parties agree that if a judicial or quasi-judicial entity declares the agreement invalid in whole or in part, it may modify the terms of the Agreement and give effect to the Agreement as modified.

17. Entire Agreement.

This Agreement embodies the entire agreement of the parties on the subject matter herein. All prior understandings and agreements relating to the subject matter of this Agreement are hereby expressly terminated.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the Company and Employee have each executed and delivered this Agreement as of the date first shown above.

EMPLOYEE:

____
(Signature)

THE COMPANY:

NUMEREX CORP

By: ____________________________

Name: ____________________________

Title: ____________________________

SCHEDULE 1

(a) "Area" means the means the geographic territory where Employee is working at the time of the termination of Employee's employment (which includes any area where any operations performed, supervised, or assisted in by Employee were conducted and any area where customers or actively sought prospective customers of the Employer with whom Employee had Material Contact are present).

(b) "Company Information" means Confidential Information and Trade Secrets.

(c) "Competitive Activities" means providing activities, products or services that are the same as or similar to the type of activities, products or services of the Company that were conducted, authorized, offered or provided by the Company within two years prior to the termination of Employee's employment with the Company.

(d) "Competitive Products and Services" means activities, products or services that are the same as or similar to the type of activities, products or services of the Company that were conducted, authorized, offered or provided by the Company within two years prior to the termination of Employee's employment with the Company.

(e) "Confidential Information" means data and information relating to the business of the Company (whether constituting a Trade Secret or not) which is or has been disclosed to the Employee or of which the Employee became aware as a consequence of or through his relationship with the Company and which has value to the Company and is not generally known to its competitors, including but not limited to trade secrets, methods of operation, names of and records relating to customers, price limits, business plans, business negotiations, market information, financial or cost information and projections, scientific and technical information, route books, personnel data, and similar information (whether of the Company or entrusted to the Company by a third party under a confidentiality agreement or mutual understanding). Confidential information shall not include any data or information which has been voluntarily disclosed to the public by the Company (except where such disclosure has been made by Employee without authorization) or that has been independently developed and disclosed to the general public by others, or otherwise entered the public domain through lawful means.

(f) "Inventions" means discoveries, concepts, ideas, inventions, improvements, designs, formulas, processes, compositions of matter, computer software programs, databases, mask works and Trade Secrets, and know-how related to all of the foregoing, whether or not patentable, relating to any current or prospective activities of the Company created by Employee during the period of and within the scope of employment, even if such Invention occurred prior to the execution of this Agreement.

(g) "Material Contact" means contact between Employee and any customer or potential customer with whom Employee dealt on behalf of the Company; whose dealings were coordinated or supervised by Employee; about whom Employee obtained Confidential Information or Trade Secrets; or who receives services from the Company that resulted in Employee receiving compensation, commissions, or earnings in the two (2) years prior to Employee's termination of employment from the Company.

(h) "Trade Secrets" means information of the Company, without regard to form, including, but not limited to, technical or nontechnical data, formulas, patterns, compilations, programs, devices, methods, techniques, drawings, processes, financial data, financial plans, product or service plans or lists of actual or potential customers or suppliers which is not commonly known by or available to the public and which information (i) derives economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

(i) "Works" means all original works of authorship, material and information created by Employee during the period of and within the scope of employment by the Company which is fixed or fixable in a tangible medium of expression, including, but not limited to, notes, drawings, memoranda, correspondence, documents, records, notebooks, forms, spreadsheets, algorithms, processes, procedures, flow charts, video, audio, graphics, artwork, music, computer programs, source code, object code, and combinations and mixtures of the foregoing, regardless of the medium in which they are fixed now known or hereafter developed, even if such Works were created prior to the execution of this Agreement.

Numerex

SEVERANCE AND CHANGE-IN-CONTROL AGREEMENT

This Severance and Change-in-Control Agreement (this "Agreement") is effective as of March 6, 2017 (the "Effective Date"), by and between Numerex Corp, a Pennsylvania corporation (the "Company") and Kelly Gay (the "Employee"). The Company and the Employee are sometimes hereinafter referred to individually as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, Employee currently serves as Chief Operating Officer of the Company; and

WHEREAS, the Company has determined that it is in the best interests of the Company to assure that the Company will have the continued dedication of the Executive, notwithstanding the possibility of his termination of employment with the Company or of a change in control of the Company;

NOW THEREFORE, in consideration of the covenants and promises set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Definitions .

1.1 "Cause" shall be limited to the following specific events:

1.1.1 Gross negligence or willful misconduct in the performance of Employee's duties;

1.1.2 A material or willful violation of federal or state law injurious to the business or reputation of the Company;

1.1.3 A refusal or willful failure to act in accordance with any specific lawful direction or order of the Company;

1.1.4 A substantive violation of Company's written policies as defined by Company;

1.1.5 A commission of an act of fraud with respect to the Company; or

1.1.6 A conviction of or pleading guilty to either a felony, or a crime causing material harm to the standing or reputation of the Company.

1.2 "Change in Control" means the occurrence of any of the following:

1.2.1 The consummation by the Company of a sale, transfer or assignment, in one transaction or a series of related transactions, of all or substantially all of the assets of Company other than to one or more affiliates of Company or one or more entities owned by stockholders of Company in substantially the same proportions as their stock ownership in Company;

1.2.2 Any “person” (as the term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), excluding affiliates of Company and employee benefit plans of Company and its affiliates, becomes the beneficial owner of more than 50% of the outstanding voting stock of Company other than as the result of the direct purchase of securities from Company; or

1.2.3 The consummation by Company of a merger or consolidation with or into any other entity, other than a merger or consolidation that results in the voting securities of Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent of the combined voting power of the surviving entity immediately after such merger or consolidation.

1.3 “Good Reason” means the existence of any of the following conditions (without Employee’s prior consent):

1.3.1 A material diminution in Employee’s title, duties or responsibilities or base compensation; or

1.3.2 A required relocation of Employee’s principal place of employment outside of 50 miles from the Company’s headquarters immediately prior to the Change in Control.

Notwithstanding the foregoing provisions of this Section 1.3, Good Reason shall only exist if the Company is provided with a 30-day period to cure the event or condition giving rise to Good Reason, and it fails to do so within such 30-day cure period and Employee resigns from employment within fifteen days following the end of the cure period.

2. Termination of Employment . If the Company shall terminate the Employee’s employment without Cause or the Employee shall terminate his employment for Good Reason (as defined in Section 1), Employee shall be entitled to receive salary and any other amounts due to Employee from the Company through the date of termination and, in addition, shall be entitled to receive a severance in an amount equal to12 (twelve) months of base salary (the “Severance Amount”), less all required tax withholdings and other applicable deductions, which amounts shall be paid out in equal installments in accordance with the Company's regular payroll procedures.

3. Change in Control .

3.1 Notwithstanding any other agreement to the contrary, if upon or within one (1) year following a Change in Control, as defined below, the Company shall terminate the Employee’s employment without Cause (as defined in Section 1) or the Employee shall terminate his employment for Good Reason (as defined in Section 1), within 60 days after termination of employment, the Company shall pay to Employee the Severance Amount, less all required tax withholdings and other applicable deductions, as a one-time, lump sum payment.

3.2 In the event of a Change in Control (as defined below), any outstanding compensatory equity award, to the extent not fully vested by the date on which such Change in Control occurs, will become fully vested upon such Change in Control.

4. General Release of Claims. Employee shall not be entitled to the Severance Amount unless Employee shall have executed and delivered to the Company a general release of claims, in such form as the Company shall specify, (the “Release”) upon or after your termination of employment and such Release has become irrevocable not later than fifty-six (56) days after the date of Employee’s termination of employment hereunder. Employee’s entitlement to the Severance Payment is further conditioned upon the return of all Company property of the Company and any of its affiliates in Employee’s possession on or prior to the date of termination of employment and complying with the terms of the Release. The Company will deliver to Employee a copy of the Release not later than three days after Employee’s termination of employment.

5. Employment At-Will. Notwithstanding anything to the contrary in this Agreement, Employee acknowledges and agrees that Employee’s employment relationship with the Company is at will and may be terminated by Employee or the Company at any time, with or without cause or notice.

6. Assignment. This Agreement is personal in nature and may not be assigned by Employee.

7. Choice of Law. This Agreement will be governed by and construed in accordance with the laws of the State of Georgia, without regard to conflicts of laws principles. Any suit, action or proceeding to determine, construe or enforce any provision of this Agreement, or the rights of either Party hereunder, shall be brought in Cobb County, Georgia, and the Parties agree that jurisdiction shall lie therein.

8. Waiver; Amendment. No waiver in any instance by any party of any provision of this Agreement shall be deemed a waiver of such provision in any other instance or a waiver of any other provision hereunder in any instance. This Agreement cannot be modified except in writing signed by the Party to be charged.

9. No Third Party Beneficiary Right. This Agreement and its terms and provisions shall not confer any rights or remedies upon any person, other than the Parties and their respective successors and permitted agents.

10. Notices. Any notice or communication under this Agreement will be in writing and sent by personal delivery or by overnight, registered or certified mail addressed to the Parties as set forth in the signature block below, or at such other address, or agent as may hereafter be designated in writing by such other Party. All such notices will be deemed given on the date personally delivered or mailed.

11. Severability. The Parties agree that each of the provisions included in this Agreement is separate, distinct, and severable from the other and remaining provisions of this Agreement, and that the invalidity or unenforceability of any provision shall not affect the validity or enforceability of any other provision or provisions of this Agreement. Further, if any provision of this Agreement is ruled invalid or unenforceable by a court of competent jurisdiction because of a conflict between such provision and any applicable law or public policy, such provision or portion thereof shall be modified or deleted in such a manner as to make this Agreement legal and enforceable to the fullest extent permitted under applicable law.

12. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, but together shall constitute one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

13. Entire Agreement **.** This Agreement, together with the terms set forth in the offer letter dated January 17, 2017, constitute the entire agreement and understanding between the Parties in relation to the subject matter hereof and there are no promises, representations, conditions, provisions or terms related thereto other than those set forth herein and therein. The Parties have each negotiated the terms hereof and carefully reviewed this Agreement.

SIGNATURE PAGE TO FOLLOW

IN **WITNESS WHEREOF,** the Parties have executed this Agreement as of the Effective Date.

COMPANY:

NUMEREX CORP.

Signature: ______________________

Title: ______________________

KELLY GAY

Signature: ______________________

Print: ______________________

Exhibit 10.19

SEVERANCE AND CHANGE-IN-CONTROL AGREEMENT

This Severance and Change-in-Control Agreement (this “Agreement”) is effective as of March 2 nd , 2016 (the “Effective Date”), by and between Company Corp., a Pennsylvania corporation (the “Company”) and Shu Gan (the “Employee”). The Company and the Employee are sometimes hereinafter referred to individually as a “Party” and collectively as the “Parties”.

RECITALS

WHEREAS, Employee currently serves as Chief Marketing Officer of the Company; and

WHEREAS, the Company has determined that it is in the best interests of the Company to assure that the Company will have the continued dedication of the Executive, notwithstanding the possibility of his termination of employment with the Company or of a change in control of the Company;

NOW THEREFORE, in consideration of the covenants and promises set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Definitions .

1.1 “Cause” shall be limited to the following specific events:

1.1.1 Gross negligence or willful misconduct in the performance of Employee’s duties;

1.1.2 A material or willful violation of federal or state law injurious to the business or reputation of the Company;

1.1.3 A refusal or willful failure to act in accordance with any specific lawful direction or order of the Company;

1.1.4 A substantive violation of Company’s written policies as defined by Company;

1.1.5 A commission of an act of fraud with respect to the Company; or

1.1.6 A conviction of or pleading guilty to either a felony, or a crime causing material harm to the standing or reputation of the Company.

1.2 “Change in Control” means the occurrence of any of the following:

1.2.1 The consummation by the Company of a sale, transfer or assignment, in one transaction or a series of related transactions, of all or substantially all of the assets of Company other than to one or more affiliates of Company or one or more entities owned by stockholders of Company in substantially the same proportions as their stock ownership in Company;

1.2.2 Any “person” (as the term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), excluding affiliates of Company and employee benefit plans of Company and its affiliates, becomes the beneficial owner of more than 50% of the outstanding voting stock of Company other than as the result of the direct purchase of securities from Company; or

1.2.3 The consummation by Company of a merger or consolidation with or into any other entity, other than a merger or consolidation that results in the voting securities of Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent of the combined voting power of the surviving entity immediately after such merger or consolidation.

1.3 “Good Reason” means the existence of any of the following conditions (without Employee’s prior consent):

1.3.1 A material diminution in Employee’s title, duties or responsibilities or base compensation; or

1.3.2 A required relocation of Employee’s principal place of employment outside of 50 miles from the Company’s headquarters immediately prior to the Change in Control.

Notwithstanding the foregoing provisions of this Section 1.3, Good Reason shall only exist if the Company is provided with a 30-day period to cure the event or condition giving rise to Good Reason, and it fails to do so within such 30-day cure period and Employee resigns from employment within fifteen days following the end of the cure period.

2. Termination of Employment . If the Company shall terminate the Employee’s employment without Cause or the Employee shall terminate his employment for Good Reason (as defined in Section 1), Employee shall be entitled to receive salary and any other amounts due to Employee from the Company through the date of termination and, in addition, shall be entitled to receive a severance in an amount equal to 6 (six) months of base salary (the “Severance Amount”), less all required tax withholdings and other applicable deductions, which amounts shall be paid out in equal installments in accordance with the Company’s regular payroll procedures.

3. Change in Control .

3.1 Notwithstanding any other agreement to the contrary, if upon or within one (1) year following a Change in Control, as defined below, the Company shall terminate the Employee’s employment without Cause (as defined in Section 1) or the Employee shall terminate his employment for Good Reason (as defined in Section 1), within 60 days after termination of employment, the Company shall pay to Employee the Severance Amount, less all required tax withholdings and other applicable deductions, as a one-time, lump sum payment.

3.2 In the event of a Change in Control (as defined below), any outstanding compensatory equity award, to the extent not fully vested by the date on which such Change in Control occurs, will become fully vested upon such Change in Control.

4. General Release of Claims. Employee shall not be entitled to the Severance Amount unless Employee shall have executed and delivered to the Company a general release of claims, in such form as the Company shall specify, (the "Release") upon or after your termination of employment and such Release has become irrevocable not later than fifty-six (56) days after the date of Employee's termination of employment hereunder. Employee's entitlement to the Severance Payment is further conditioned upon the return of all Company property of the Company and any of its affiliates in Employee's possession on or prior to the date of termination of employment and complying with the terms of the Release. The Company will deliver to Employee a copy of the Release not later than three days after Employee's termination of employment.

5. Employment At-Will. Notwithstanding anything to the contrary in this Agreement, Employee acknowledges and agrees that Employee's employment relationship with the Company is at will and may be terminated by Employee or the Company at any time, with or without cause or notice.

6. Assignment. This Agreement is personal in nature and may not be assigned by Employee.

7. Choice of Law. This Agreement will be governed by and construed in accordance with the laws of the State of Georgia, without regard to conflicts of laws principles. Any suit, action or proceeding to determine, construe or enforce any provision of this Agreement, or the rights of either Party hereunder, shall be brought in Cobb County, Georgia, and the Parties agree that jurisdiction shall lie therein.

8. Waiver; Amendment. No waiver in any instance by any party of any provision of this Agreement shall be deemed a waiver of such provision in any other instance or a waiver of any other provision hereunder in any instance. This Agreement cannot be modified except in writing signed by the Party to be charged.

9. No Third Party Beneficiary Right. This Agreement and its terms and provisions shall not confer any rights or remedies upon any person, other than the Parties and their respective successors and permitted agents.

10. Notices. Any notice or communication under this Agreement will be in writing and sent by personal delivery or by overnight, registered or certified mail addressed to the Parties as set forth in the signature block below, or at such other address, or agent as may hereafter be designated in writing by such other Party. All such notices will be deemed given on the date personally delivered or mailed.

11. Severability. The Parties agree that each of the provisions included in this Agreement is separate, distinct, and severable from the other and remaining provisions of this Agreement, and that the invalidity or unenforceability of any provision shall not affect the validity or enforceability of any other provision or provisions of this Agreement. Further, if any provision of this Agreement is ruled invalid or unenforceable by a court of competent jurisdiction because of a conflict between such provision and any applicable law or public policy, such provision or portion thereof shall be modified or deleted in such a manner as to make this Agreement legal and enforceable to the fullest extent permitted under applicable law.

12. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, but together shall constitute one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

13. Entire Agreement. This Agreement, together with the terms set forth in the offer letter dated September 22, 2015, constitute the entire agreement and understanding between the Parties in relation to the subject matter hereof and there are no promises, representations, conditions, provisions or terms related thereto other than those set forth herein and therein. The Parties have each negotiated the terms hereof and carefully reviewed this Agreement.

SIGNATURE PAGE TO FOLLOW

IN **WITNESS WHEREOF,** the Parties have executed this Agreement as of the Effective Date.

COMPANY:

NUMEREX CORP.

Signature: ______________________________

Title: ______________________________

EMPLOYEE

Signature: ______________________________

Print: ______________________________

Exhibit 10.20

Numerex

SEVERANCE AND CHANGE-IN-CONTROL AGREEMENT

This Severance and Change-in-Control Agreement (this “Agreement”) is effective as of 3/17/2016 (the “Effective Date”), by and between Numerex Corp, a Pennsylvania corporation (the “Company”) and Ken Gayron (the “Employee”). The Company and the Employee are sometimes hereinafter referred to individually as a “Party” and collectively as the “Parties”.

RECITALS

WHEREAS, Employee currently serves as Chief Financial Officer of the Company; and

WHEREAS, the Company has determined that it is in the best interests of the Company to assure that the Company will have the continued dedication of the Executive, notwithstanding the possibility of his termination of employment with the Company or of a change in control of the Company;

NOW THEREFORE, in consideration of the covenants and promises set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Definitions .

1.1 “Cause” shall be limited to the following specific events:

1.1.1 Gross negligence or willful misconduct in the performance of Employee’s duties;

1.1.2 A material or willful violation of federal or state law injurious to the business or reputation of the Company;

1.1.3 A refusal or willful failure to act in accordance with any specific lawful direction or order of the Company;

1.1.4 A substantive violation of Company’s written policies as defined by Company;

1.1.5 A commission of an act of fraud with respect to the Company; or

1.1.6 A conviction of or pleading guilty to either a felony, or a crime causing material harm to the standing or reputation of the Company.

1.2 “Change in Control” means the occurrence of any of the following:

1.2.1 The consummation by the Company of a sale, transfer or assignment, in one transaction or a series of related transactions, of all or substantially all of the assets of Company other than to one or more affiliates of Company or one or more entities owned by stockholders of Company in substantially the same proportions as their stock ownership in Company;

1.2.2 Any “person” (as the term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), excluding affiliates of Company and employee benefit plans of Company and its affiliates, becomes the beneficial owner of more than 50% of the outstanding voting stock of Company other than as the result of the direct purchase of securities from Company; or

1.2.3 The consummation by Company of a merger or consolidation with or into any other entity, other than a merger or consolidation that results in the voting securities of Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent of the combined voting power of the surviving entity immediately after such merger or consolidation.

1.3 “Good Reason” means the existence of any of the following conditions (without Employee’s prior consent):

1.3.1 A material diminution in Employee’s title, duties or responsibilities or base compensation; or

1.3.2 A required relocation of Employee’s principal place of employment outside of 50 miles from the Company’s headquarters immediately prior to the Change in Control.

Notwithstanding the foregoing provisions of this Section 1.3, Good Reason shall only exist if the Company is provided with a 30-day period to cure the event or condition giving rise to Good Reason, and it fails to do so within such 30-day cure period and Employee resigns from employment within fifteen days following the end of the cure period.

2. Termination of Employment . If the Company shall terminate the Employee’s employment without Cause or the Employee shall terminate his employment for Good Reason (as defined in Section 1), Employee shall be entitled to receive salary and any other amounts due to Employee from the Company through the date of termination and, in addition, shall be entitled to receive a severance in an amount equal to12 (twelve) months of base salary (the “Severance Amount”), less all required tax withholdings and other applicable deductions, which amounts shall be paid out in equal installments in accordance with the Company’s regular payroll procedures.

3. Change in Control .

3.1 Notwithstanding any other agreement to the contrary, if upon or within one (1) year following a Change in Control, as defined below, the Company shall terminate the Employee’s employment without Cause (as defined in Section 1) or the Employee shall terminate his employment for Good Reason (as defined in Section 1), within 60 days after termination of employment, the Company shall pay to Employee the Severance Amount, less all required tax withholdings and other applicable deductions, as a one-time, lump sum payment.

3.2 In the event of a Change in Control (as defined below), any outstanding compensatory equity award, to the extent not fully vested by the date on which such Change in Control occurs, will become fully vested upon such Change in Control.

4. General Release of Claims. Employee shall not be entitled to the Severance Amount unless Employee shall have executed and delivered to the Company a general release of claims, in such form as the Company shall specify, (the "Release") upon or after your termination of employment and such Release has become irrevocable not later than fifty-six (56) days after the date of Employee's termination of employment hereunder. Employee's entitlement to the Severance Payment is further conditioned upon the return of all Company property of the Company and any of its affiliates in Employee's possession on or prior to the date of termination of employment and complying with the terms of the Release. The Company will deliver to Employee a copy of the Release not later than three days after Employee's termination of employment.

5. Employment At-Will. Notwithstanding anything to the contrary in this Agreement, Employee acknowledges and agrees that Employee's employment relationship with the Company is at will and may be terminated by Employee or the Company at any time, with or without cause or notice.

6. Assignment. This Agreement is personal in nature and may not be assigned by Employee.

7. Choice of Law. This Agreement will be governed by and construed in accordance with the laws of the State of Georgia, without regard to conflicts of laws principles. Any suit, action or proceeding to determine, construe or enforce any provision of this Agreement, or the rights of either Party hereunder, shall be brought in Cobb County, Georgia, and the Parties agree that jurisdiction shall lie therein.

8. Waiver; Amendment. No waiver in any instance by any party of any provision of this Agreement shall be deemed a waiver of such provision in any other instance or a waiver of any other provision hereunder in any instance. This Agreement cannot be modified except in writing signed by the Party to be charged.

9. No Third Party Beneficiary Right. This Agreement and its terms and provisions shall not confer any rights or remedies upon any person, other than the Parties and their respective successors and permitted agents.

10. Notices. Any notice or communication under this Agreement will be in writing and sent by personal delivery or by overnight, registered or certified mail addressed to the Parties as set forth in the signature block below, or at such other address, or agent as may hereafter be designated in writing by such other Party. All such notices will be deemed given on the date personally delivered or mailed.

11. Severability. The Parties agree that each of the provisions included in this Agreement is separate, distinct, and severable from the other and remaining provisions of this Agreement, and that the invalidity or unenforceability of any provision shall not affect the validity or enforceability of any other provision or provisions of this Agreement. Further, if any provision of this Agreement is ruled invalid or unenforceable by a court of competent jurisdiction because of a conflict between such provision and any applicable law or public policy, such provision or portion thereof shall be modified or deleted in such a manner as to make this Agreement legal and enforceable to the fullest extent permitted under applicable law.

12. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, but together shall constitute one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

13. Entire Agreement. This Agreement, together with the terms set forth in the offer letter dated _____________, constitute the entire agreement and understanding between the Parties in relation to the subject matter hereof and there are no promises, representations, conditions, provisions or terms related thereto other than those set forth herein and therein. The Parties have each negotiated the terms hereof and carefully reviewed this Agreement.

SIGNATURE PAGE TO FOLLOW

IN **WITNESS WHEREOF,** the Parties have executed this Agreement as of the Effective Date.

COMPANY:

NUMEREX CORP.

Signature: ______________________________

Title: ______________________________

EMPLOYEE

Signature: ______________________________

Print: ______________________________

Exhibit 10.26

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER SUCH ACT AND APPLICABLE STATE SECURITIES LAWS OR PURSUANT TO AN APPLICABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF SUCH ACT AND SUCH LAWS.

AS PROVIDED IN THIS NOTE, PAYMENT OF PRINCIPAL, INTEREST AND OTHER AMOUNTS PAYABLE IN RESPECT OF THIS NOTE IS SUBORDINATED AND JUNIOR IN RIGHT OF PAYMENT TO ALL SENIOR OBLIGATIONS (AS SUCH TERM IS DEFINED IN THIS NOTE), AND EACH HOLDER OF THIS INSTRUMENT, BY ITS ACCEPTANCE HEREOF, IRREVOCABLY AGREES TO BE BOUND BY SUCH SUBORDINATION PROVISIONS.

SENIOR SUBORDINATED PROMISSORY NOTE
DUE APRIL 1, 2018

$5,000,000 March 31, 2017

FOR VALUE RECEIVED, the undersigned, Numerex Corp., a Pennsylvania corporation (the " Borrower "), promises to pay to Kenneth Rainin Foundation, a California corporation (together with its successors and permitted assigns, the " Holder "), the principal amount of FIVE MILLION AND 00/100 United States Dollars ($5,000,000), together with interest on the unpaid principal amount thereof, in the manner and subject to the terms and conditions provided in this Senior Subordinated Promissory Note (as the same may be amended, restated, amended and restated, modified or supplemented from time to time, this " Note ").

1. Payments . Except as otherwise provided herein, all payments under this Note shall be made in immediately available funds to the account that the Holder shall from time to time designate to the Borrower for such purpose. If any amounts under this Note become due and payable on a day that is not a Business Day, such amounts shall be paid on the next succeeding Business Day and interest shall continue to accrue until such amounts have been paid. All payments made hereunder shall be applied first, to the payment of any fees or charges outstanding hereunder, second, to accrued interest and third, to the payment of the principal amount outstanding under this Note. For purposes of this Note, " Business Day " shall mean any day that is not a Saturday, a Sunday or a day on which financial institutions in Oakland, California or Atlanta, Georgia are required or authorized to close.

2. Principal Payments . Subject to Section 5 of this Note, the principal amount of this Note shall be due and payable on April 1, 2018 (the " Maturity Date ").

3. Interest Payments . This Note shall bear interest at a per annum rate equal to twelve percent (12%) (the " Interest Rate "). Subject to Section 5 of this Note, the Borrower shall pay accrued interest on the unpaid balance of this Note quarterly in arrears on the third Business Day of each calendar quarter commencing on July 5, 2017 until and including on the Maturity Date (each, an " Interest Payment Date "). Subject to Section 5 of this Note, interest shall be payable in immediately available funds on the date such interest becomes due and payable, whether on an Interest Payment Date, on the Maturity Date, upon earlier prepayment, upon acceleration or otherwise. Interest on this Note shall accrue from the date of issuance until repayment of the principal and payment of all accrued and unpaid interest in full. Interest shall be computed on the basis of a 365 (or 366, as applicable)-day year and the number of actual days elapsed.

4. Optional Prepayment. Subject to Section 5 of this Note, the Borrower shall have the right at any time to prepay, without premium or penalty, the outstanding principal amount hereof, in whole or in part, at any time and from time to time after the date hereof. On the date of any prepayment as provided herein, the Borrower shall pay all then accrued and unpaid interest on the amount so prepaid, up to and including the date of such prepayment.

5. Subordination. Notwithstanding any contrary provision set forth herein, the Holder agrees, by its acceptance of this Note, for itself and each future holder of this Note or any portion hereof (the Holder and any such future holder being hereinafter referred to as the " Subordinated Creditor "), as follows:

(a) Subordinated to Senior Obligations. All of the indebtedness, obligations and liabilities evidenced by or related to or arising in connection with this Note (or any note issued upon transfer of this Note) including, without limitation, all principal, interest and other amounts, whether direct or indirect, absolute or contingent, joint or several, due or not due, primary or secondary, liquidated or unliquidated (collectively, the " Subordinated Obligations ") shall at all times be wholly subordinate and junior in right of payment to the prior payment in full of all Senior Obligations to the extent and in the manner provided in this Section 5.

For purposes of this Note,

(1) " United States Bankruptcy Code " shall mean 11 U.S.C. Section 101 et seq., as amended from time to time.

(2) " paid in full" or "payment in full " means, with respect to the Senior Obligations, (i) payment in full in cash of the principal and interest (including, without limitation, any interest which accrues after the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower regardless of whether any such interest constitutes an allowed claim in any such case, proceeding or other action), on all obligations outstanding under the Senior Credit Documents constituting Senior Obligations, (ii) payment in full in cash of all other Senior Obligations that are due and payable or otherwise accrued and owing at or prior to the time such principal and interest are paid (including, without limitation, legal fees and other expenses, costs or charges which accrue after the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower regardless of whether any such fees, expenses, costs or charges constitute an allowed claim in any such case, proceeding or other action), and (iii) with respect to any contingent obligations constituting Senior Obligations (other than contingent obligations to the extent that no claim giving rise thereto has been asserted), the cash collateralization of such obligations on terms acceptable to the holders of such obligations (as determined by such holders in their sole discretion);

(3) " Senior Obligations " means, collectively, all "Obligations" as defined in the Senior Credit Agreement and any and all indebtedness, obligations and liabilities of every kind, nature and description of the Borrower now or hereafter owing or arising under the Senior Credit Documents (as defined below), whether direct or indirect, absolute or contingent, joint or several, due or not due, primary or secondary, liquidated or unliquidated, and as such indebtedness, obligations and liabilities may, in accordance clause (i) of this Section 5, be increased, renewed, replaced, refunded or refinanced with the same or different lenders or agents, including, without limitation, the principal amount of, and premium, if any, and accrued interest on (including, without limitation,

any interest which accrues after the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower regardless of whether any such interest constitutes an allowed claim in any such case, proceeding or other action) the loans outstanding thereunder, all letter of credit or similar reimbursement obligations arising thereunder and all fees, costs, expenses, charges and indemnities payable thereunder;

(4) " Senior Credit Documents " means the Senior Credit Agreement and any promissory notes, guarantees, collateral and security documents (including mortgages, pledge agreements and other security arrangements) and other instruments and agreements executed in connection therewith, in each instance, as amended, restated, amended and restated, modified or supplemented from time to time (or replaced from time to time in connection with a refinancing or replacement of the Senior Obligations); and

(5) " Senior Credit Agreement " means, collectively, (i) the Term Loan Agreement (as amended, restated, amended and restated, modified or supplemented from time to time, the " Initial Term Loan Agreement "), dated as of March 9, 2014, by and among the Borrower, Numerex Solutions, LLC, NextAlarm, LLC, Cellemetry LLC, Omnilink Systems Inc., Telemetry Services Corporation, Cellemetry Services, LLC, Numerex Government Services LLC, Orbit One Communications, LLC, uBlip, Inc., and Uplink Security, LLC, Crystal Financial LLC as term agent (the " Senior Agent "), and the term lenders party thereto from to time (the " Senior Lenders "), providing for a term loan in the original principal amount of $17,000,000 and (ii) any other credit agreement, loan agreement, note agreement, promissory note, indenture or other agreement or instrument evidencing or governing the terms of any indebtedness, obligations or liabilities or other financial accommodations that have been incurred to renew, refund, replace or refinance, in whole or in part, any indebtedness, obligations or liabilities under the Initial Term Loan Agreement or any subsequent Senior Credit Agreement, in each instance, as amended, restated, amended and restated, modified, supplemented, renewed, refunded, restructured, replaced or refinanced in whole or in part from time to time, provided, (x) the aggregate principal amount of the Senior Obligations shall not increase to more than $13,800,000 (plus the amount of any protective overadvances), and (b) the maturity date of the Senior Obligations shall not be extended, in each case as a result of any such renewal, refund, replacement or refinancing without the Holder's express written consent.

(b) Subordination in Right of Payment . Unless and until such time as (1) the Senior Obligations shall have been paid in full and (2) no holder of any Senior Obligation shall have any continuing commitment to provide the Borrower or its subsidiaries with any loan, letter of credit or other financial accommodation that would constitute a Senior Obligation (the time in which clauses (1) and (2) occur being referred to herein as the " Discharge of Senior Obligations "), no payment shall be made by or on behalf of the Borrower for or on account of any Subordinated Obligation, and the Subordinated Creditor shall not take, receive, demand or sue for, directly or indirectly (including, without limitation, by set-off, redemption, purchase or in any other manner) any payment, distribution, prepayment or collateral security for the whole or any part of the Subordinated Obligations (whether in cash, property or securities), whether for the principal or interest thereof or otherwise; provided that, so long as no "Default" or "Event of Default" (as such terms are defined in the Senior Credit Agreement) has occurred and is continuing or would result from the payments contemplated hereunder, the Borrower may make and the Subordinated Creditor may receive regularly scheduled cash payments of interest in accordance with Section 3 of this Note. For the avoidance of doubt, the Borrower shall not make nor shall any holder of Subordinated Obligations receive, any payments of the principal amount outstanding under this Note until a Discharge of the Senior Obligations has occurred.

(c) No Exercise of Remedies; Limitation on Actions. The Subordinated Creditor shall not (A) take any action or exercise any rights, remedies or powers under the terms of the Subordinated Obligations, or exercise any other right or remedy at law or equity that the Subordinated Creditor might otherwise possess, to collect any amount due and payable under the Subordinated Obligations, including, but not limited to, the acceleration of the Subordinated Obligations, the making of any demand in respect of the Subordinated Obligations, the commencement of any enforcement action or any foreclosure on any lien or security interest, the filing of any petition in bankruptcy or joining with any other creditor for the commencement of any bankruptcy proceeding or the taking advantage of any other insolvency law of any jurisdiction, unless and until the Discharge of Senior Obligations has occurred or (B) take any actions (including without limitation vote in any way) with respect to the Subordinated Obligations which would (i) impair any rights or interests of the Senior Agent or any Senior Lender under any Senior Credit Document or under this Section 5, (ii) contest the validity or enforceability of the Senior Obligations, any Senior Credit Document, the lien and security interests of the Senior Agent and the Senior Lenders in any collateral securing any of the Senior Obligations, this Section 5 or any of the respective terms hereof or thereof, or (iii) impair the ability of the Senior Agent or any Senior Lender to enforce and collect the Senior Obligations or to preserve, protect and realize upon any collateral securing any of the Senior Obligations.

(d) Distributions in a Bankruptcy or Insolvency Proceeding, Liquidation, Etc. (A) In the event of any distribution, division or application, partial or complete, voluntary or involuntary, by operation of law or otherwise, of all or any part of the property, assets or business of the Borrower, or the proceeds thereof, to any creditor or creditors of the Borrower, or (B) upon any liquidation, dissolution or other winding-up of the Borrower or its business or by reason of any sale, receivership, insolvency, reorganization or bankruptcy proceedings, assignment for the benefit of creditors, or any arrangement or proceeding by or against the Borrower for any relief under any bankruptcy, reorganization or insolvency law or laws, federal or state, or any law, federal or state, relating to the relief of debtors, readjustment of indebtedness, reorganization, composition, or extension, or (C) in the event that any of the Senior Obligations have become, or have been declared to be, due and payable (and have not been paid in full in accordance with their terms), or (D) in the event that the Subordinated Obligations have been declared to be due and payable, then and in any such event, any payment or distribution of any kind or character, whether in cash, property or securities, which, but for the subordination provisions contained herein, would otherwise be payable or deliverable to the Subordinated Creditor upon or in respect of the Subordinated Obligations in any case, proceeding, assignment, marshalling or otherwise or in respect of any other indebtedness of the Borrower that is subordinated to the payment of this Note, shall instead be paid over or delivered by the liquidating trustee or agent or other person making such payment or distribution, whether a trustee in bankruptcy, a receiver or liquidating trustee or otherwise, to the Senior Agent for application to the Senior Obligations, and the Subordinated Creditor shall not receive any such payment or distribution or any benefit therefrom unless and until the Discharge of Senior Obligations has occurred.

(e) Filing of Proofs of Claims, Etc. The Subordinated Creditor irrevocably authorizes and empowers the Senior Agent (but the Senior Agent shall have no obligation), under the circumstances set forth in clause (A) or (B) of Section 5(d) hereof, to demand, sue for, collect and receive every such payment or distribution referred to in such subsection and give acquittance therefor, and file claims and proofs of claim in any statutory or non-statutory proceeding and take such other proceedings, in its own name, or in the name of the Subordinated Creditor or otherwise, as the Senior Agent may deem necessary or advisable for the enforcement of the provisions of this Note. The Subordinated Creditor hereby agrees, under the circumstances set forth in clause (A) or (B) of Section 5(d) hereof, (A) duly and promptly to take such action as may be requested at any time and from time to time by the Senior Agent to collect the Subordinated Obligations for the account of the Senior Lenders and to file appropriate proofs of claim in respect of the Subordinated Obligations, and to execute and deliver such powers of attorney, assignments or proofs of claim or other instruments as may be requested by the Senior Agent in order to enable the Senior Agent to enforce any and all claims upon or in respect of, and any security interest and other liens securing payment of, the Subordinated Obligations and to collect and receive any and all payments or distributions which may be payable or deliverable at any time upon or in respect of the Subordinated Obligations, (B) that it will consent to, and not object to or oppose, a sale or other disposition of any property securing all or any part of any Senior Obligations free and clear of any claims of the Subordinated Creditor under the United States Bankruptcy Code, or comparable provisions of state law, including Sections 363, 365 and 1129 of the United States Bankruptcy Code, if the Senior Agent has consented to such sale or disposition, and (C) not to object to or oppose any adequate protection sought by the Senior Agent or object to or oppose any motion by the Senior Agent to lift the automatic stay or any other stay in any proceeding.

(f) Turn-Over Provisions . Should any payment or distribution or collateral security, or the proceeds of any thereof, of any kind or character, whether in cash, property or securities, be collected or received by the Subordinated Creditor in respect of the Subordinated Obligations, and such collection or receipt is not expressly permitted hereunder, the Subordinated Creditor forthwith will turn over the same to the Senior Agent for application to the Senior Obligations, in the form received (except for the endorsement or the assignment of the Subordinated Creditor when necessary) and, until so turned over, the same shall be held in trust by the Subordinated Creditor as the property of the Senior Agent and the Senior Lenders, and be segregated from other funds and property held by the Subordinated Creditor.

(g) Assignments, Pledges, Etc. This Note shall not be transferred, pledged or encumbered to any person without the prior written consent of the Senior Agent in its sole and absolute discretion. Upon the transfer to any other person of part or all of this Note or the pledge or encumbrance of this Note in compliance with the first sentence of this clause (g), the Subordinated Creditor shall notify the Senior Agent of the name and address of the transferee or transferees or of the person in whose favor the pledge or encumbrance is made (the " Lienholder "), and, in the case of a transfer of part or all of this Note, the principal amount of the Note transferred to each such person, and such transferee or transferees or Lienholder shall have agreed in writing to be bound by the terms of this Note (and until such time as such transferee or transferees or Lienholder has agreed in writing to be so bound, such transfer, pledge or encumbrance shall not be effective for any purpose).

(h) Required Subordination . At all times the Subordinated Obligations shall be subject to all of the subordination provisions contained herein and shall be evidenced by a note containing all such subordination provisions.

(i) No Impairment of Senior Obligations . The Subordinated Creditor consents that, without further assent by or notice to the Subordinated Creditor, without impairing, abridging, releasing or effecting the subordination provided for herein, (a) any demand for payment of any of the Senior Obligations made by the Senior Agent or any Senior Lender may be rescinded in whole or in part by the Senior Agent or such Senior Lender, as applicable, and any of the Senior Obligations, or the liability of the Borrower or any other party upon or for any part thereof (including any guarantor thereof), or any collateral security therefor or right of offset with respect thereto, may, from time to time, in whole or in part, be increased, renewed, modified, accelerated, compromised, waived, surrendered or released by the Senior Agent or any Senior Lender, as the case may be; provided, that the aggregate principal amount of the Senior Obligations shall not exceed $13,800,000 (plus the amount of any protective overadvances) as a result without the Holder's express written consent; (b) any document or instrument evidencing or governing the terms of any Senior Obligations or any collateral security documents or guaranties or documents in connection therewith may be amended, modified, waived, supplemented or terminated, in whole or in part, and any collateral security at any time held by the Senior Agent or any Senior Lender for the payment of any of the Senior Obligations may be sold, exchanged, waived, surrendered or released and any guaranty of the Senior Obligations may be released; (c) the Senior Lenders may exercise or refrain from exercising any right, remedy or power granted by any document or instrument creating, evidencing or otherwise relating to the Senior Obligations, or at law, in equity or otherwise, with respect to the Senior Obligations, or any guaranty thereof, or any collateral security, held, given or intended to be given therefor (including, without limitation, the right to perfect any lien or security interest created in connection therewith); and (d) any balance of funds with any bank or other institution at any time standing to the credit of the Borrower or any guarantor of any of the Senior Obligations may, from time to time, in whole or in part, be surrendered or released.

(j) Limitation on Subrogation Rights . No payment or distribution to any holder of Senior Obligations shall entitle the Subordinated Creditor to exercise any rights of subrogation in respect thereof until the Discharge of Senior Obligations has occurred. At such time as the Discharge of Senior Obligations has occurred, the Subordinated Creditor shall be subrogated, to the extent of payments or distributions made to the holders of Senior Obligations pursuant to or by reason of this Section 5, to the rights of the holders of such Senior Obligations until all amounts due under this Note shall be paid in full; and for the purposes of such subrogation, no payments or distributions to holders of such Senior Obligation of any cash, property or securities to which the Subordinated Creditor would be entitled except for the provisions of this Section 5 shall, as among the Borrower, its creditors (other than holders of such Senior Obligations) and the Subordinated Creditor, be deemed to be a payment by the Borrower to or on account of such Subordinated Obligations, it being understood that the provisions of this Section 5 are solely for the purpose of defining the relative rights of the holders of such Senior Obligations, on the one hand, and the Subordinated Creditor, on the other hand.

(k) Obligations of the Borrower Unconditional . Nothing contained in this Note is intended to or shall impair, as between the Borrower and the Holder, the obligation of the Borrower, which is absolute and unconditional, to pay to the Holder all amounts owed under this Note, as and when the same shall become due and payable in accordance with its terms, or to affect the relative rights of the Holder and other creditors of the Borrower (other than the holders of Senior Obligations), except as provided in this Section 5.

(l) Section 5 Not To Prevent Events of Default . The failure to make a payment of any amounts due and payable under this Note by reason of any provision of this Section 5 shall not be construed as preventing the occurrence of an Event of Default under Section 10 hereof.

(m) Reliance on Subordination . The Subordinated Creditor by its acceptance hereof acknowledges and agrees that the foregoing subordination provisions, and the other provisions herein that are for the benefit of the Senior Agent and the Senior Lenders, are, and are intended to be, an inducement and a consideration to the Senior Agent and the Senior Lenders to continue to hold the Senior Obligations and to consent to the issuance of this Note and the Senior Agent and such Senior Lenders shall be deemed conclusively to have relied on such subordination and other provisions in acquiring and continuing to hold such Senior Obligations and consenting to the issuance of this Note and shall be deemed a third party beneficiary of such provisions, entitled to the enforcement thereof. This Section 5 is a continuing agreement of subordination and the Senior Lenders may continue to make loans to or otherwise accept the obligations of the Borrower in reliance hereon, without notice to any holder of this Note.

(n) Continuing Subordination. The subordination provisions contained herein (i) are for the benefit of the Senior Lenders and may not be rescinded, cancelled, amended or modified in any way without the prior written consent thereto of the Senior Agent; (ii) shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any of the Senior Obligations is rescinded or must otherwise be returned by the Senior Agent or any Senior Lender upon the insolvency, bankruptcy or reorganization of the Borrower, all as though such payment had not been made; (iii) shall continue to be effective notwithstanding any final judgment affecting the validity or enforceability of the Senior Obligations under Section 548 of the United States Bankruptcy Code, or comparable provisions of state law; and (iv) shall be binding upon the Subordinated Creditor and its successors and assigns, and inure to the benefit of and be enforceable by the Senior Agent and each Senior Lender and its successors and assigns.

(o) No Waiver. No failure on the part of the Senior Agent or any Senior Lender to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any right hereunder preclude any other by further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

(p) Specific Performance. The Subordinated Creditor hereby acknowledges that the Senior Agent and the Senior Lenders may demand specific performance of the subordination provisions contained herein, whether or not the Borrower shall have complied with the provisions of the Senior Credit Agreement or any other document or agreement evidencing Senior Obligations applicable to it, at any time when the Subordinated Creditor shall have failed to comply with any provision hereof applicable to it, and the Subordinated Creditor hereby irrevocably waives any defense based on the adequacy of a remedy which might be asserted in such circumstance as a bar to the at law remedy of specific performance hereof in any action brought therefor by the Senior Agent or any Senior Lender.

(q) Amendments and Modifications. Until the Discharge of Senior Obligations has occurred, the Subordinated Creditor covenants and agrees that (i) it will not modify or amend or permit modification or amendment of this Note without obtaining the prior written consent of the Senior Agent (and any amendment or modification without such consent shall be void ab initio) and (ii) it will not cancel or discharge any of the Subordinated Obligations other than upon repayment of any amounts owing under this Note in accordance with the terms hereof, convert or exchange any of the Subordinated Obligations into or for any other indebtedness or equity interest or subordinate any of the Subordinated Obligations to any indebtedness of the Borrower other than the Senior Obligations.

(r) Authorizations in a Bankruptcy or Insolvency Proceeding. In any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower, the Subordinated Creditor irrevocably authorizes the Senior Lenders: (i) to prove and enforce any claims in respect of the Subordinated Obligations either in the name of the Senior Lenders or in the name of the Subordinated Creditor as the attorney-in-fact of the Subordinated Creditor; (ii) to vote claims comprising the Subordinated Obligations and to accept or reject on behalf of the Subordinated Creditor any plan proposed in connection with such case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower; (iii) to accept and execute receipts for any payment or distribution made with respect to any and all Subordinated Obligations; and (iv) to take action and to execute any instruments necessary to effectuate the foregoing either in the name of the Senior Lenders or in the name of the Subordinated Creditor as its attorney-in-fact.

(s) Subordinated Obligations to be Unsecured. Notwithstanding anything to the contrary contained herein or elsewhere, the Subordinated Obligations shall at all times be unsecured. The Subordinated Creditor shall not seek to obtain, and shall not take, accept, obtain or have, any lien or security interest in or on any asset or property of the Borrower or any of its affiliates as security for all or any part of the Subordinated Obligations. Neither the Borrower nor any subsidiary or affiliate thereof shall grant and no holder of Subordinated Indebtedness shall take a lien or security interest in any property or other assets to secure any of the Subordinated Obligations until such time as the Discharge of Senior Obligations has occurred. Any agreement, document or action that purports to grant a lien or security interest to the Subordinated Creditor on any asset or property of the Borrower or any of its affiliates as security for any Subordinated Obligations shall be null and void and of no force and effect and the Subordinated Creditor shall promptly execute and deliver to any Senior Lender such documents, agreements and instruments, and take such other actions, as such Senior Lender shall request to evidence that such liens and security interests are of no force and effect. Any Senior Lender may release any lien taken to secure any of the Subordinated Obligations in violation of this provision and the Subordinated Creditor hereby irrevocably authorizes, empowers and appoints each Senior Lender as its agent and attorney-in-fact to prepare, execute, verify, deliver and file such documentation necessary to release any such lien.

(t) Purchase Option .

(i) Without prejudice to the enforcement of the remedies of the Senior Agent and the Senior Lenders, at any time within the twenty (20) calendar day period following the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower, the Subordinated Creditor shall have the right, but not the obligation, to purchase all (but not less than all) of the Senior Agent's and the Senior Lenders' right, title and interest in and to the Senior Obligations (the " Senior Interest ", and such right, the " Purchase Option "); provided, that the Purchase Option shall expire if the Subordinated Creditor fails to deliver written notice (the " Purchase Notice ") to the Senior Agent of the Subordinated Creditor's exercise of the Purchase Option within such twenty (20) calendar day period. The Purchase Notice, if given, shall be irrevocable. Upon receipt of the Purchase Notice by the Senior Agent, the Subordinated Creditor shall have from the date of such receipt to and including the date that is five (5) Business Days after the date of such receipt to purchase the Senior Interest in accordance herewith (the date of such purchase, the " Purchase Date ").

(ii) On the Purchase Date, the Senior Agent and the Senior Lenders shall, subject to any required approval of any Governmental Authority, sell to the Subordinated Creditor the Senior Interest, and the Subordinated Creditor shall (A) pay to the Senior Agent as the purchase price therefor, for the benefit of the Senior Lenders, as directed by the Senior Agent, in immediately available funds, the full amount of all Senior Obligations then outstanding, including all accrued and unpaid interest and fees thereon, all in the amounts specified by the Senior Agent and determined in accordance with the Senior Credit Documents, and (B) agree to reimburse the Senior Agent and the Senior Lenders for any loss, cost, damage or expense (x) resulting from the granting of provisional credit for any checks, wire or ACH transfers that are reversed or not final or other payments provisionally credited to the Senior Obligations under the Senior Credit Documents and as to which the Senior Agent and the Senior Lenders have not yet received final payment as of the Purchase Date, and (y) for any indemnification obligations (other than on account of indemnification obligations for unknown claims as of the Purchase Date). Such purchase price shall be remitted by wire transfer in immediately available funds to such bank account of the Senior Agent (for the benefit of the Senior Lenders) as the Senior Agent shall have specified in writing to the Subordinated Creditor. Interest and fees shall be calculated to but excluding the Purchase Date if the amounts so paid by the Subordinated Creditor to the bank account designated by the Senior Agent are received in such bank account prior to 11:00 a.m., New York time, and interest shall be calculated to and including the Purchase Date if the amounts so paid by the Subordinated Creditor to the bank account designated by the Senior Agent are received in such bank account after 11:00 a.m., New York time.

(iii) Such purchase shall be expressly made without representation or warranty of any kind by the Senior Agent or the Senior Lenders as to the Senior Interest so purchased or otherwise and without recourse to the Senior Agent or the Senior Lenders, except that the Senior Agent and each Senior Lender shall represent and warrant: (A) that the amount quoted by such party as its portion of the purchase price represents the amount shown as owing in respect of the claims transferred as reflected on its books and records, (B) that such party owns, or has the right to transfer to the Subordinated Creditor, such party's respective portion of the Senior Interest being transferred, and (C) that such transfer will be free and clear of liens of such party.

(iv) Upon the consummation of the purchase of the Senior Interest in accordance herewith, the Senior Agent shall be deemed to have resigned as an "agent", "administrative agent", and "collateral agent" for itself and the other secured parties under the Senior Credit Documents; provided , that the Senior Agent shall be entitled to all of the rights and benefits of a former "agent", "administrative agent" or "collateral agent" under the Senior Credit Documents. Notwithstanding the purchase of the Senior Interest by the Subordinated Creditor, the Senior Agent and the other secured parties under the Senior Credit Documents shall retain those contingent indemnification obligations and other obligations owing or to be owing to them under the Senior Credit Documents, which by their express terms would survive any repayment of the Senior Obligations.

(v) If the Subordinated Creditor fails to exercise the Purchase Option or fails to close the purchase of the Senior Interest, in each case, in accordance herewith, then the Senior Agent and the Senior Lenders shall have no further obligations to the Subordinated Creditor under this clause (t).

6. Representations and Warranties of the Borrower . The Borrower represents and warrants to the Holder on the date hereof:

(a) Existence . The Borrower is a corporation duly incorporated, validly existing and subsisting under the laws of the Commonwealth of Pennsylvania.

(b) Power and Authority . The Borrower has the requisite power and authority to own its property and assets and to carry on its business as now conducted and is qualified or licensed to do business in every jurisdiction where such qualification or licensing is required, except where the failure to be so qualified or licensed could not reasonably be expected to result in a material adverse change in, or have a material adverse effect on, the business, assets, operations or financial condition of the Borrower or impair the validity or enforceability of, or the ability of the Borrower to perform its obligations under, this Note (a " Material Adverse Effect "). The Borrower has the requisite power and authority to execute and deliver this Note and to perform its obligations hereunder.

(c) Authorization; Execution and Delivery . The execution and delivery of this Note by the Borrower and the performance of its obligations hereunder have been duly authorized by all necessary corporate action. The Borrower has duly executed and delivered this Note.

(d) Interested Director. The Borrower acknowledges that one of the members of the Borrower's Board of Directors has a financial or other interest in the Holder such that he could be considered an interested director for purposes of Section 1728 of the Business Corporation Law of 1988 of the Commonwealth of Pennsylvania (" Section 1728 ") with respect to transactions contemplated by this Note. Accordingly, the Borrower represents and warrants that the terms of this Note and the transactions contemplated hereby have been negotiated between the Borrower and the Holder on an arms' length basis and have been approved by the Borrower's Board of Directors in accordance with the standards and procedures set forth in Section 1728.

(e) No Approvals. No consent or authorization of, filing with, notice to or other act by, or in respect of, any Governmental Authority or any other person is required in order for the Borrower to execute, deliver, or perform any of its obligations under this Note except for such notices that have been provided on or prior to the date hereof.

(f) No Violations. The execution and delivery of this Note and the consummation by the Borrower of the transactions contemplated hereby do not and will not (i) violate any provision of the Borrower's organizational documents; ii) violate any Law or Order applicable to the Borrower or by which any of its properties or assets may be bound; or (iii) constitute a default under any material agreement or contract by which the Borrower may be bound.

(g) Enforceability. This Note is a valid, legal and binding obligation of the Borrower, enforceable against the Borrower in accordance with its terms except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally and by general equitable principles (whether enforcement is sought by proceedings in equity or at law).

For purposes of this Note:

(1) " Governmental Authority " means the government of any nation or any political subdivision thereof, whether at the national, state, territorial, provincial, municipal or any other level, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of, or pertaining to, government (including any supranational bodies such as the European Union or the European Central Bank);

(2) " Law " means any law (including common law), statute, ordinance, treaty, rule, regulation, policy or requirement of any Governmental Authority and authoritative interpretations thereon; and

(3) " Order " means any order, decree, judgment, writ, injunction, settlement agreement, requirement or determination of an arbitrator or a court or other Governmental Authority.

7. Representations and Warranties of the Holder. The Holder, by its acceptance of this Note, represents and warrants to the Borrower that:

(a) Existence. The Holder is duly incorporated, validly existing and in good standing under the laws of the State of California.

(b) Authorization; Execution and Delivery. The acquisition of this Note by the Holder has been duly authorized by all necessary corporate action.

(c) No Violations. The acquisition of this Note does not and will not (a) violate any provision of the Holder's organizational documents; (b) violate any Law or Order applicable to the Holder or by which any of its properties or assets may be bound; or (c) constitute a default under any material agreement or contract by which the Holder may be bound.

(d) Securities Laws.

(i) The Holder is acquiring this Note for investment for its own account and not with a view to, or for resale in connection with, any distribution thereof in any transaction that would be in violation of state or federal securities laws.

(ii) The Holder is a sophisticated purchaser with respect to the purchase of this Note and is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended (including the rules and regulations of the Securities and Exchange Commission thereunder, the "Securities Act").

(iii) The Holder acknowledges and understands that (i) this Note constitutes a restricted security under the Securities Act, (ii) the offer and sale of this Note has not been registered under the Securities Act or the securities laws of any state in reliance upon certain exemptions from such registration and that the Borrower is relying on the representations made herein by the Holder in its determination of whether such specific exemptions are available, and (iii) this Note may not be transferred except pursuant to an effective registration statement under the Securities Act, or under an exemption from such registration available under the Securities Act and under applicable state securities laws or in a transaction exempt from such registration. The Holder acknowledges that: (1) it has no right to require registration of this Note under the Securities Act or any state securities laws, and (2) there is not now and is not contemplated to be any public market for this Note. As a result, the Holder is prepared and is able to bear the economic risk of an investment in this Note for an indefinite period of time.

(iv) The Holder (i) has been furnished with or has had access to all material books and records of the Borrower and its subsidiaries and all of their respective material contracts, agreements and documents and (ii) has had an opportunity to ask questions of, and receive answers from, management and representatives of the Borrower and its subsidiaries and which representatives have made available to them such information regarding the Borrower and its subsidiaries and their current respective businesses, operations, assets, finances, financial results, financial condition and prospects in order to make a fully informed decision to purchase and acquire this Note. The Holder has generally such knowledge and experience in business and financial matters as to enable it to understand and evaluate the risks of an investment in this Note and form an investment decision with respect hereto. The Holder acknowledges that none of the Borrower or its subsidiaries has given such Holder any investment advice, credit information or opinion as to whether the purchase of this Note is prudent.

(e) Interested Director. The Holder acknowledges that one of the members of the Borrower's Board of Directors has a financial or other interest in the Holder such that he could be considered an interested director for purposes of Section 1728 with respect to transactions contemplated by this Note. Accordingly, the Holder represents and warrants that the terms of this Note and the transactions contemplated hereby have been negotiated between the Borrower and the Holder on an arms' length basis.

8. Affirmative Covenants. The Borrower hereby covenants and agrees with the Holder that, so long as this Note or any provision hereof shall remain in effect, or the principal of or interest on this Note or other obligation hereunder or with respect to this Note shall be unpaid or outstanding, the Borrower shall do as follows:

(a) Payment of Taxes. Pay all taxes, levies, imposts, deductions, charges or withholdings imposed by any Governmental Authority upon its properties or assets or in respect of its franchises, business, income or profits before any penalty accrues thereon, unless the amount, applicability or validity thereof is currently being contested in good faith by appropriate proceedings and adequate reserves with respect thereto are maintained by the Borrower if required in accordance with U.S. generally accepted accounting principles.

(b) Compliance with Laws. Comply in all respects with all applicable Laws if noncompliance therewith could reasonably be expected to result in a Material Adverse Effect.

(c) Preservation of Existence and Licenses. Preserve and maintain its existence and its rights, franchises and privileges in the jurisdiction of its formation and qualify and remain qualified as a foreign entity in each jurisdiction in which the failure to do so could result in a Material Adverse Effect.

(d) Maintenance of Assets. Maintain, repair, replace or declare obsolete its material tangible assets in good condition and repair in accordance with the requirements of its business and affairs. Maintain its material intellectual property and its exclusive rights to use and exploit or license any intellectual property, and defend all material interferences or material infringements therewith. Maintain its real property and not commit waste with respect thereto.

(e) Use of Proceeds. Use the proceeds of this Note to immediately prepay $5,000,000 of the Senior Obligations.

(f) Deal Expenses. The Borrower shall reimburse the Holder for (a) all of its legal expenses, and (b) other expenses of up to $10,000, in each case incurred by the Holder in connection with analyzing, negotiating and finalizing the terms of this Note.

(g) Executive Committee. The Borrower shall use its best efforts to ensure that, within 60 days of the closing date for this Note, Brian Igoe is added as a member of the Borrower's ad hoc Executive Committee formed to consider the Borrower's strategic alternatives, which committee currently consists of Tony Holcombe, Andy Ryan, Eric Singer and Stratton Nicolaides.

9. Negative Covenants. The Borrower hereby covenants and agrees with the Holder as follows:

(a) Indebtedness. The Borrower will not, and will not permit any of its subsidiaries to, directly or indirectly, create, incur or suffer to exist any Indebtedness (as defined in the Initial Term Loan Agreement), except the following: (i) the obligations hereunder, (ii) Indebtedness existing on the date hereof (provided, for such purposes, any Indebtedness arising under the Senior Obligations that is repaid with the proceeds of this Note shall not be deemed to be existing on the date hereof), (iii) Indebtedness permitted under the Initial Term Loan Agreement, (iv) Indebtedness incurred in the ordinary course of business (provided it is permitted under the Senior Credit Documents) and (v) Indebtedness incurred under a Senior Credit Agreement to replace or refinance the Senior Obligations under the Initial Term Loan Agreement; provided, however, that the obligations under this Note shall be at least pari passu to all Indebtedness other than the Senior Obligations.

(b) Liens. The Borrower will not, and will not permit any of its subsidiaries to, create, incur or suffer to exist any Lien (as defined in the Initial Term Loan Agreement) in, of or on its property (whether now owned or hereafter acquired, or upon any income, profits or proceeds therefrom), except the following: (i) Liens existing on the date hereof, (ii) Permitted Liens (as defined in the Initial Term Loan Agreement) and (iii) Liens incurred in the ordinary course of the business (provided they are permitted under the Senior Credit Documents).

(c) Minimum Adjusted EBITDA . The Borrower shall not permit Adjusted EBITDA (as defined in the Initial Term Loan Agreement), as of the last day of any quarter (for the immediately preceding twelve (12) month period) set forth below to be less than the minimum amount set forth in the table below opposite such date:

Quarter	**Minimum Adjusted EBITDA**
March 31, 2017	$1,750,000
June 30, 2017	$1,900,000
September 30, 2017	$2,400,000
December 31, 2017, and the last day of each fiscal quarter thereafter	$4,400,000

(d) Maximum Consolidated Total Net Leverage . The Borrower shall not permit the Consolidated Total Net Leverage (as defined in the Initial Term Loan Agreement), as of the last day of any quarter (for the immediately preceding twelve (12) month period) set forth below, to be greater than the maximum ratio set forth in the table below opposite such date:

Quarter	**Maximum Consolidated Total Net Leverage**
March 31, 2017	3.50 : 1.00
June 30, 2017	3.00 : 1.00
September 30, 2017	2.50 : 1.00
December 31, 2017 and the last day of each fiscal quarter thereafter	2.00 : 1.00

10. Event of Default . Each of the following events shall constitute an " Event of Default " hereunder:

(a) if the Borrower shall default in the payment when due of principal or interest under this Note, and such default shall continue for a period of five (5) Business Days thereafter;

(b) if the Borrower fails to observe or perform any affirmative covenant, negative covenant or other agreement set forth in this Note and such default is not remedied within thirty (30) days after notice of such default by the Holder; provided, if the Borrower shall fail to comply with the affirmative covenant set forth in Section 8(e) of this Note within one (1) Business Day of the Holder's remittance of the principal amount of this Note to the Borrower, then the Holder may, in its discretion, immediately declare an Event of Default to have occurred with respect to this Note;

(c) any representation or warranty made by the Borrower in this Note proves to have been untrue, incomplete or misleading in any material respect when made or when deemed to have been made and such breach is not remedied (if it is capable of being remedied) within thirty (30) days after notice of such default by the Holder;

(d) if, pursuant to or within the meaning of any federal or state bankruptcy or insolvency law (a " Debtor Relief Law "), the Borrower shall (i) commence a voluntary bankruptcy, insolvency or similar case or proceeding; (ii) consent to the entry of an order for relief against it in an involuntary case; (iii) consent to the appointment of a trustee, receiver, assignee, liquidator or similar official; (iv) make an assignment for the benefit of its creditors; or (v) admit in writing its inability to pay its debts as they become due;

(e) if an involuntary case or other proceeding shall be commenced against the Borrower seeking liquidation, reorganization or other relief with respect to it or its debts under any Debtor Relief Law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official having power to dispose of the Borrower's assets, and such involuntary case or other proceeding shall remain undismissed and unstayed for a period of 60 days; or an order for relief shall be entered against the Borrower under any Debtor Relief Law as now or hereafter in effect; or

(f) subject to the restrictions and limitations in Sections 5 and 10, if an event of default occurs under the Senior Credit Documents for any reason and the Senior Obligations have been accelerated, or an event of default occurs with respect to any Indebtedness with an unpaid principal amount in excess of $250,000 for any reason, if the effect of such event of event of default is to cause such Indebtedness to be accelerated.

The Borrower agrees that, upon becoming actually aware of the occurrence and continuance of an Event of Default hereunder, the Borrower shall provide prompt written notice thereof to the Holder and the Senior Agent.

11. Remedies. Subject to the restrictions and limitations in Sections 5 and 10, upon the occurrence and during the continuance of an Event of Default hereunder (unless all Events of Default have been cured by the Borrower or waived by the Holder), the Holder may, at its option, (i) by written notice to the Borrower, declare the entire unpaid principal balance of this Note, together with all accrued interest thereon, immediately due and payable regardless of any prior forbearance and (ii) exercise any and all rights and remedies available to it under applicable Law, including, without limitation, the right to collect from the Borrower all sums due under this Note. Upon the occurrence and during the continuance of an Event of Default hereunder (until such time that all Events of Default have been cured by the Borrower or waived by the Holder), the interest rate on this Note shall increase to fourteen percent (14%) or, if lower, the highest interest rate permitted under applicable law.

12. Transfer. This Note may not be transferred or assigned by the Holder without the prior written consent of the Borrower and any such assignment shall comply with the provisions of Section 5(g) of this Note; provided, the Borrower agrees that it will not withhold its consent to a transfer by the Holder of all or a portion of this Note to one or more affiliates of the Holder subject to compliance with the provisions of Section 5(g) of this Note and applicable Law.

13. Waiver. The rights and remedies of the parties under this Note shall be cumulative and not alternative. No waiver by any party of any right or remedy under this Note shall be effective unless in writing and signed by the party from whom such waiver is sought. Neither the failure nor any delay in exercising any right, power or privilege under this Note will operate as a waiver of such right, power or privilege, and no single or partial exercise of any such right, power or privilege by either party will preclude any other or further exercise of such right, power or privilege or the exercise of any other right, power or privilege. To the maximum extent permitted by applicable law, (a) no claim or right of either party arising out of this Note can be discharged by such party, in whole or in part, by a waiver or renunciation of the claim or right unless in a writing signed by such party; (b) no waiver that may be given by either party will be applicable except in the specific instance for which it is given; and (c) no notice to or demand on the either party will be deemed to be a waiver of any obligation of such party or of the right of either party to take further action without notice or demand as provided in this Note.

14. Replacement Note. Upon receipt of evidence reasonably satisfactory to the Borrower of the loss, theft, destruction or mutilation of this Note and of a letter of indemnity reasonably satisfactory to the Borrower, the Borrower will make and deliver a new Note of like tenor in lieu of such lost, stolen, destroyed or mutilated Note.

15. Notices. Any notice or other communication required or permitted hereunder shall be in writing and shall be delivered by hand or overnight courier service or sent by certified or registered mail and addressed as set forth below. Any notice or other communication shall be deemed to have been received (i) if delivered by hand, when personally delivered, (ii) if delivered by overnight courier service, one (1) business day after delivery to such courier service and (iii) if sent by certified or registered mail, five (5) days after the date of deposit in the United States mails, postage prepaid.

If to the Borrower:

Numerex Corp.
400 Interstate North Parkway, 13th Floor
Atlanta, GA 30339

Email:	kgayron@numerex.com ehyun@numerex.com
Telephone:	(770) 615-1410 (770) 615-1431
Attention:	Kenneth Gayron Eugene Hyun

With a copy (which shall not constitute notice) to:

Andrew J. Ryan
The Ryan Law Group LLP
14 E. 4th St., Suite 406
New York, NY 10012
Email: ar@trlg-llp.com

If to the Holder:

Kenneth Rainin Foundation
155 Grand Avenue, Suite 1000
Oakland, CA 94612
Attn: Jose Flores

If to the Senior Agent:

Crystal Financial LLC
Two International Place, 17th Floor
Boston, MA 02110
Attention: Christopher Arnold

or, in the case of any party, at such other address as such party shall designate by a written notice to each other party.

16. Amendment. Subject to Section 5(q) of this Note, this Note may be amended, modified, superseded, canceled, renewed or extended, and the terms and conditions hereof may be

waived, only by written instrument signed by the Borrower and the Holder, and, in the case of a waiver, by the party waiving compliance.

17. Severability. If any provision in this Note is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Note will remain in full force and effect. Any provision of this Note held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

18. GOVERNING LAW. THIS NOTE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS OF SUCH STATE THAT WOULD REQUIRE THE APPLICATION OF THE LAW OF ANOTHER JURISDICTION.

19. Jurisdiction; Venue; Waiver of Jury Trial. (a) The Borrower and the Holder hereby irrevocably and unconditionally (i) agree that any legal action, suit or proceeding arising out of or relating to this Note may be brought in the courts of the State of New York or of the United States of America for the Southern District of New York and (ii) submit to the non-exclusive jurisdiction of any such court in any such action, suit or proceeding. Final judgment against the Borrower or the Holder in any action, suit or proceeding shall be conclusive and may be enforced in any other jurisdiction by suit on the judgment.

(b) The Borrower and the Holder irrevocably and unconditionally waive, to the fullest extent permitted by applicable Law, any objection that they may now or hereafter have to the laying of venue of any action or proceeding arising out of or relating to this Note in any court referred to in this Section 19 and the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

(c) THE BORROWER AND THE HOLDER HEREBY IRREVOCABLY WAIVE, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT THEY MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY RELATING TO THIS NOTE OR THE TRANSACTIONS CONTEMPLATED HEREBY WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY.

20. Entire Agreement. This Note contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, written or oral, with respect thereto.

21. Costs and Expenses of Collection. Subject to Section 5 of this Note, the Borrower shall reimburse the Holder for all reasonable costs and expenses (including reasonable legal fees and disbursements) incurred by the Holder in connection with the collection or attempted collection of the payment of this Note through legal proceedings or otherwise following an Event of Default.

22. Usury. Anything in this Note to the contrary notwithstanding, it is expressly stipulated and agreed that the intent of the Borrower and the Holder is to comply at all times with all usury and other Laws relating to this Note. If the Laws of the State of New York or any other jurisdiction would now or hereafter render usurious, or are revised, repealed or judicially interpreted so as to render usurious, the indebtedness evidenced by this Note, then it is the Borrower's and the Holder's express intent that all excess amounts theretofore collected by the Holder be credited to the principal balance of this Note (or, if the Note has been paid in full, refunded to the Borrower), and the provisions of this Note immediately be deemed reformed and the amounts therefore collectible hereunder reduced, without the

necessity of execution of any new document, so as to comply with the then applicable Law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

23. Indemnity for Returned Payments. If, after receipt of any payment or application of proceeds which is applied to the payment of all or any part of the obligations outstanding or payable hereunder, the Holder is for any reason compelled to surrender such payment or proceeds to any individual, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, or any other entity of whatever nature because such payment or application of proceeds is invalidated, declared fraudulent, set aside, rescinded, determined to be void or voidable as a preference, impermissible setoff, or a diversion of trust funds, or for any other reason, then the obligations or part thereof intended to be satisfied by such payment or application shall be revived and continued and this Note shall continue in full force as if such payment or proceeds had not been received by the Holder and the Borrower shall be liable to pay the amount of such payment or proceeds, and interest thereon, to the Holder, subject to Section 5 of this Note.

24. General Indemnification. The Borrower hereby agrees to indemnify the Holder for, and hold the Holder harmless from and against: (a) any and all damages, losses, claims and other liabilities of any kind, including, judgments and costs of settlement, and (b) any and all out-of-pocket costs and expenses of any and every kind, including, without limitation, reasonable fees and disbursements of counsel for such Holder, in each case, arising out of or suffered or incurred in connection with a claim made or brought by any person other than the Borrower with respect to any of the following: (i) any misrepresentation or any breach of any warranty made by the Borrower in this Note and (ii) any breach or non-fulfillment of any covenant or agreement made by the Borrower in this Note.

[SIGNATURE PAGE FOLLOWS]

NUMEREX CORP., as Borrower

By: ______________________________
Name:
Title:

Acknowledged:

KENNETH RAININ FOUNDATION, as Holder

By: ______________________________
Name:
Title:

EXHIBIT 21.1

Subsidiaries of Numerex Corp .

Subsidiaries of Numerex Corp.
Cellemetry, LLC
NextAlarm, LLC
Numerex Solutions, LLC
Omnilink Systems, Inc.
uBlip, Inc.

Subsidiaries of Cellemetry LLC
Uplink Security, LLC

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-8 (File No. 333-51780, No. 333-105142, No. 333-143805, No. 333-192142, and No. 333-200034) of Numerex Corp. and subsidiaries of our reports dated March 31, 2017, relating to the consolidated financial statements and financial statement schedule, and the effectiveness of Numerex Corp. and subsidiaries internal control over financial reporting, which appear in this Form 10-K.

/s/ BDO USA, LLP
Atlanta, Georgia
March 31, 2017

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 14, 2016, with respect to the consolidated financial statements and schedule included in the Annual Report of Numerex Corp. on Form 10-K for the year ended December 31, 2016. We consent to the incorporation by reference of said report in the Registration Statements of Numerex Corp. on Forms S-8 (File No. 333-51780, File No. 333-105142, File No. 333-143805, File No. 333-192142, and File No. 333-200034).

/s/ GRANT THORNTON LLP
Atlanta, Georgia
March 31, 2017

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Kenneth L. Gayron, certify that:

1. I have reviewed this Annual Report on Form 10-K of Numerex Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a – 15(f) and 15d-15(f)) for the registrant and we have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2017
By: *<u>/s/ Kenneth L. Gayron</u>*
Kenneth L. Gayron
Interim Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Kenneth L. Gayron, certify that:

1. I have reviewed this Annual Report on Form 10-K of Numerex Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a – 15(f) and 15d-15(f)) for the registrant and we have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2017
By: *\/s/ Kenneth L. Gayron*
Kenneth L. Gayron
Chief Financial Officer and Principal
Financial and Accounting Officer

Exhibit 32.1

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

In connection with the Annual Report of Numerex Corp. (the "Company") on Form 10-K for the period ending December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Kenneth L. Gayron, as Interim Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certificate is being furnished solely pursuant to 8 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document, and may not be disclosed, distributed or used by any person or for any reason other than as specifically required by law.

March 31, 2017
By: *_/s/ Kenneth L. Gayron_*
Kenneth L. Gayron
Interim Chief Executive Officer

Exhibit 32.2

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

In connection with the Annual Report of Numerex Corp. (the “Company”) on Form 10-K for the period ending December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kenneth L. Gayron, as Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certificate is being furnished solely pursuant to 8 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document, and may not be disclosed, distributed or used by any person or for any reason other than as specifically required by law.

March 31, 2017
By: *\/s/ Kenneth L. Gayron*
Kenneth L. Gayron
Chief Financial Officer and Principal
Financial and Accounting Officer