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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2015

OR

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

For the transition period from to .

Commission file number 001-36467

RESONANT INC.

(Exact Name of Registrant as Specified in Its charter)

Delaware	**45-4320930**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

110 Castilian Drive, Suite 100, Goleta, California 93117

(Address of Principal Executive Offices) (Zip Code)

(805) 308-9803

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	The NASDAQ Stock Market LLC

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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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 ☐ (Do not check if smaller reporting company)	Smaller reporting company ☒

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

As of June 30, 2015, the aggregate market value of the voting and non-voting common equity held by non-affiliates was $21 million, based on the closing price on that date. As of March 22, 2016, the registrant had 7,389,506 shares of common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the registrant's 2016 Annual Meeting of Stockholders are incorporated by reference in Part III of this Annual Report on Form 10-K. Such Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of December 31, 2015, the last day of the fiscal year covered by this Annual Report on Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect" and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning the following:

- *the status of filter designs under development;*
- *the prospects for licensing filter designs upon completion of development;*
- *plans for other filter designs not currently in development;*
- *potential customers for our designs;*
- *the timing and amount of future royalty streams;*
- *our plans regarding the use of proceeds from our IPO and the expected duration of our capital resources;*
- *our plans regarding future financings;*
- *our hiring plans;*
- *the impact of our designs on the mobile device market;*
- *our business strategy;*
- *our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;*
- *the timing and success of our plan of commercialization;*
- *our dependence on growth in our customers' businesses;*
- *the effects of market conditions on our stock price and operating results;*
- *our ability to maintain our competitive technological advantages against competitors in our industry and the related costs associated with defending intellectual property infringement and other claims;*
- *our ability to timely and effectively adapt our existing technology and have our technology solutions gain market acceptance;*
- *our ability to introduce new offerings and bring them to market in a timely manner;*
- *our ability to maintain, protect and enhance our intellectual property;*
- *our expectations concerning our relationships with our customers and other third parties and our customers' relationships*

with their manufacturers;

- *the attraction and retention of qualified employees and key personnel;*

- *future acquisitions of or investments in complementary companies or technologies; and*

- *our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company and United States export regulations.*

These forward-looking statements speak only as of the date of this Form 10-K and are subject to uncertainties, assumptions and business and economic risks. As such, our actual results could differ materially from those set forth in the forward-looking statements as a result of the factors set forth below in Part I, Item 1A, "Risk Factors," and in our other reports filed with the Securities and Exchange Commission. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this Form 10-K may not occur, and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Form 10-K to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this Annual Report on Form 10-K and the documents that we reference in this Annual Report on Form 10-K and have filed with the Securities and Exchange Commission as exhibits thereto with the understanding that our actual future results and circumstances may be materially different from what we expect.

PART I

ITEM 1. BUSINESS

Overview

Resonant is a late-stage development company creating innovative filter designs for radio frequency, or RF, front-ends for the mobile device industry. The RF front-end is the circuitry in a mobile device responsible for analog signal processing and is located between the device's antenna and its digital baseband. We use a fundamentally new technology called Infinite Synthesized Networks®, or ISN®, to configure and connect resonators, the building blocks of RF filters. Filters are a critical component of the RF front-end used to select desired radio frequency signals and reject unwanted signals. We are using ISN to develop new classes of filter designs.

We plan to commercialize our technology by creating filter designs that address the problems created by the growing number of frequency bands in the RF front-end of mobile devices. We are developing a series of single-band surface acoustic wave, or SAW, filter designs for frequency bands presently dominated by larger and more expensive bulk acoustic wave, or BAW, filters. In addition, we are generating designs for bands that are now done with temperature-compensated SAWs, as well as some simpler SAW products. We are also developing multiplexer filter designs for 2 or more bands to address the carrier aggregation, or CA, requirements of our customers. Finally, we are developing reconfigurable filter designs to replace multiple filters for multiple bands. In order to succeed, we must convince RF front-end suppliers that our filter designs can significantly reduce the size and cost of their products.

We continued to make progress during 2015 in the development of our technology in all areas of RF filter design. We have completed the development of a single-band filter design (a duplexer) that currently is being manufactured by a third-party fab, and we have several other single-band filter designs in various stages of development and commercialization. In the fourth quarter of 2015, we began to investigate the feasibility of using our technology to design multiplexers to address the complexities of carrier aggregation, and we have commenced the initial design parameters for a couple of potential multiplexers. During 2015, we produced initial parts for a reconfigurable filter that reconfigures between two bands, which parts are currently being optimized, and continued development of a filter reconfigurable between three bands.

We believe licensing our designs is the most direct and effective means of delivering our solutions to the market. Our target customers make part or all of the RF front-end. We intend to retain ownership of our designs, and we expect to be compensated through license fees and royalties based on sales of RF front-end filters that incorporate our designs. We currently do not intend to manufacture or sell any physical products or operate as a contract design company developing designs for a fee.

Our History

Our technology was originally pioneered by Superconductor Technologies Inc., or STI. STI commercialized discoveries in high temperature superconductors by developing unique RF filter technology and creating high performance RF filters for cellular towers. STI had a program from 2007 to 2010 to develop electronically reconfigurable RF filters for mobile devices using surface acoustic wave, or SAW, filter technology. Dr. Robert Hammond was STI's Chief Technology Officer during this time. When STI halted work on the RF filter program in 2010 in order to devote its resources to the development of high temperature superconducting wire, Dr. Hammond, along with Terry Lingren, then serving as Vice President of Engineering at Kyocera Communications, Inc., and Neal Fenzi, who was then serving as Chief Engineer at STI, co-founded Resonant.

We were incorporated in Delaware in January 2012 as a wholly owned subsidiary of STI but had not conducted any operations through June 16, 2013. Resonant LLC was formed in California in May 2012. We commenced business on July 6, 2012 with initial contributions from our founders and STI. We changed our form of ownership from a limited liability company to a corporation in an exchange transaction in June 2013. We are the successor of Resonant LLC, a limited liability company formed on May 29, 2012 (our inception date). We commenced business on July 6, 2012 and completed our initial public offering, or IPO, on May 29, 2014, or IPO Date.

Industry Background

Glossary

The following is a glossary of useful terms:

- *Band, channel or frequency band*—a designated range of radio wave frequencies used to communicate with a mobile device.
- *Bulk acoustic wave (BAW)*—an acoustic wave traveling through a material exhibiting elasticity.
- *Duplexer*—a bi-directional device that connects the antenna to the transmitter and receiver of a wireless device and simultaneously filters both the transmit signal and receive signal.
- *Carrier Aggregation (CA)*—the aggregation, or adding together, of multiple 20MHz carriers to meet the LTE-Advanced specification requirements, allowing for increased transmission bandwidth delivery of higher data rates, improved capacity and more efficient use of a carriers fragmented spectrum.
- *Filter*—a series of interconnected resonators designed to pass (or select) a desired radio frequency signal and block unwanted signals.
- *Reconfigurable filter (previously referred to as Tunable)*—a single filter that is capable of being tuned or reconfigured between two or more predetermined bands.
- *Resonator*—a device that naturally oscillates (or resonates) at specific frequencies. The oscillations in a resonator can be either electromagnetic or mechanical (including acoustic). Resonators are the building blocks for filters.
- *RF front-end*—the circuitry in a mobile device responsible for the analog signal processing which is located between the antenna and the digital baseband.
- *Surface acoustic wave (SAW)*—an acoustic wave traveling along the surface of a material exhibiting elasticity, with an amplitude that typically decays exponentially with depth into the substrate.
- *Temperature-Compensated SAW (TC-SAW)*—a SAW device which has additional material changes to reduce its variation with changes in temperature.

The Mobile Internet

The need for duplexers and other filters in the RF front-ends of mobile devices is growing rapidly due to rising consumer demand for always-on wireless broadband. Mobile devices such as smartphones and tablets are quickly becoming the primary means of accessing the internet. According to Cisco, worldwide mobile data traffic grew at 74% in 2015 and will grow at a compounded annual growth rate of 57% from 2014 to 2019. Cisco also reported that data traffic from wireless devices exceeded traffic from wired devices in 2014.

The exponential growth in mobile data traffic is testing the limits of existing wireless bandwidth. Carriers and regulators have responded by opening new RF spectrum, driving up the number of frequency bands in mobile devices. As a prime example, the AWS-3 spectrum auction conducted by the FCC, which closed on January 29, 2015, raised a record $44.9 billion for an additional 65MHz of spectrum in the United States. Similar auctions are occurring worldwide.

According to Navian, the market for RF front-end filters in mobile devices was 20.4 billion filters in 2014 and will grow to an estimated 37.5 billion filters by 2017 which is a compounded growth of approximately 21%.

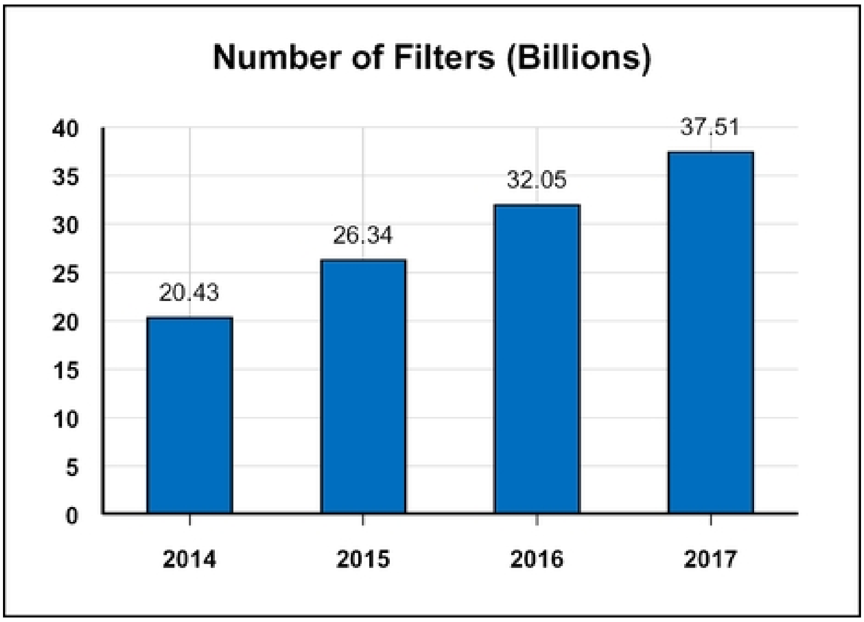

Figure 1—Projected growth of the market for RF front-end filters including duplexers in mobile devices from 2014 through 2017 (in billions of filters). *Source: Navian.*

In addition to RF front-end filter unit growth, filter sales growth is expected to follow and is estimated to be $3.2 billion in 2014 and is forecasted to reach $5.2 billion by 2017, according to Navian. This represents a compound annual growth rate of approximately 17.5%.

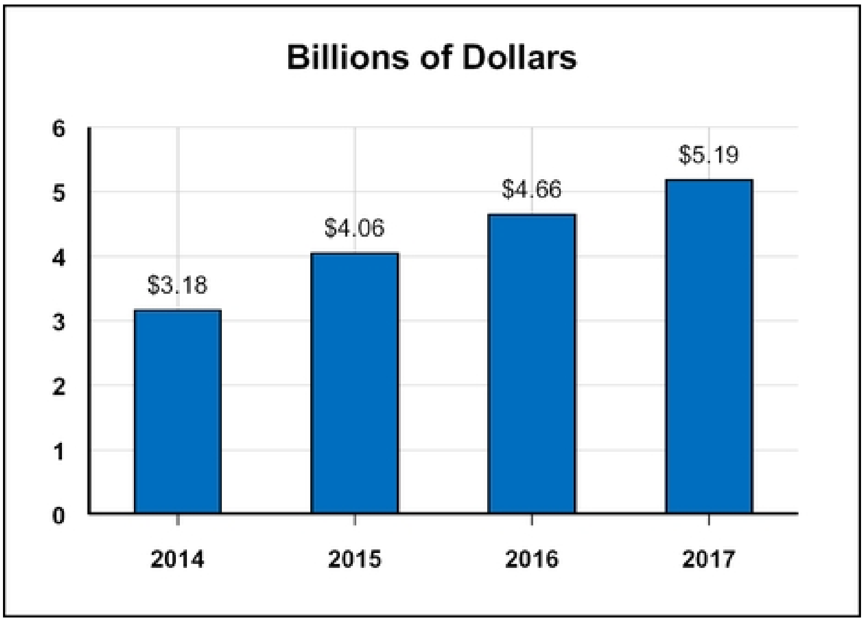

Figure 2—Projected growth of the market for RF front-end filters, including duplexers, in mobile devices from 2014 through 2017 (in billions of dollars). *Source: Navian.*

Adding RF spectrum is not a complete solution. The added spectrum does not come in large contiguous blocks, but rather in small channels or bands of varying size and frequency. Thus, more data means more bands, and the result is a rapid and substantial increase in the number of bands in mobile devices.

Challenges Faced by the Mobile Device Industry

The world is progressing toward ubiquitous RF coverage in which almost all devices will be connected, most wirelessly. Technology experts predict that by 2020 there will be over 20 billion connected devices operating worldwide and we will be measuring mobile usage in Exabytes. This overwhelming demand for wireless data has driven the carriers and regulators to open new spectrum bands.

This substantial and rapid increase in bands has created several significant problems including a corresponding increase in the number of filters and duplexers in mobile devices. This is because traditional RF front-end solutions typically require one duplexer for each frequency band. For example, over the past two years the duplexer count in a leading smartphone increased from nine to 23 duplexers and corresponding large increase in the number of individual filters. This is dramatically driving up the cost of RF front-ends. We believe that filters and duplexers will comprise almost half of the cost to the RF front-end market by 2017.

The growing number of duplexers is also increasing the total size of the RF front-end. In some cases, size constraints require the mobile device manufacturer to fragment its product offering into multiple versions, each with a limited set of duplexers customized for a particular geographic region and in some cases focused on just one carrier network. Multiple versions of a mobile product increases manufacturing, inventory and distribution costs. In addition, consumers can find it difficult to roam between carriers and/or countries due to this splintering of bands and phone models. Mobile device manufacturers would prefer to make one version of a product containing a full set of duplexers that can be electronically selected as required for a particular carrier network.

In addition, the new, higher frequency bands tend to use a relatively expensive BAW technology. Mobile device manufacturers would prefer to use SAW technology because of its lower cost and smaller size. However, conventional filter designs using SAW technology do not perform adequately in high frequency bands or in bands with closely spaced receive and transmit channels, typical of many new bands.

Adding to the complexity of the industry, mobile devices must now be capable of receiving from two to as many as five downlink bands simultaneously, known as downlink carrier aggregation, or CA. This carrier aggregation requirement creates the need for complex multiplexing filter modules, or multiplexers, which are significantly more complex than duplexers and effectively require two duplexers for each CA combination. There will be an estimated 140 worldwide combinations of CA cases, creating increased complexity and cost to RF front ends by 2017. In the case of a quadplexer, with four different frequency bands, within each band the signal loss must be minimized, while rejecting three bands often in close proximity. Duplexers must only reject a single band. Mobile Experts predicts that 26.4 billion RF paths in mobile phones will be shipped supporting CA in 2020. This rising complexity in the industry is also exacerbating the constraints on design capacity and resources.

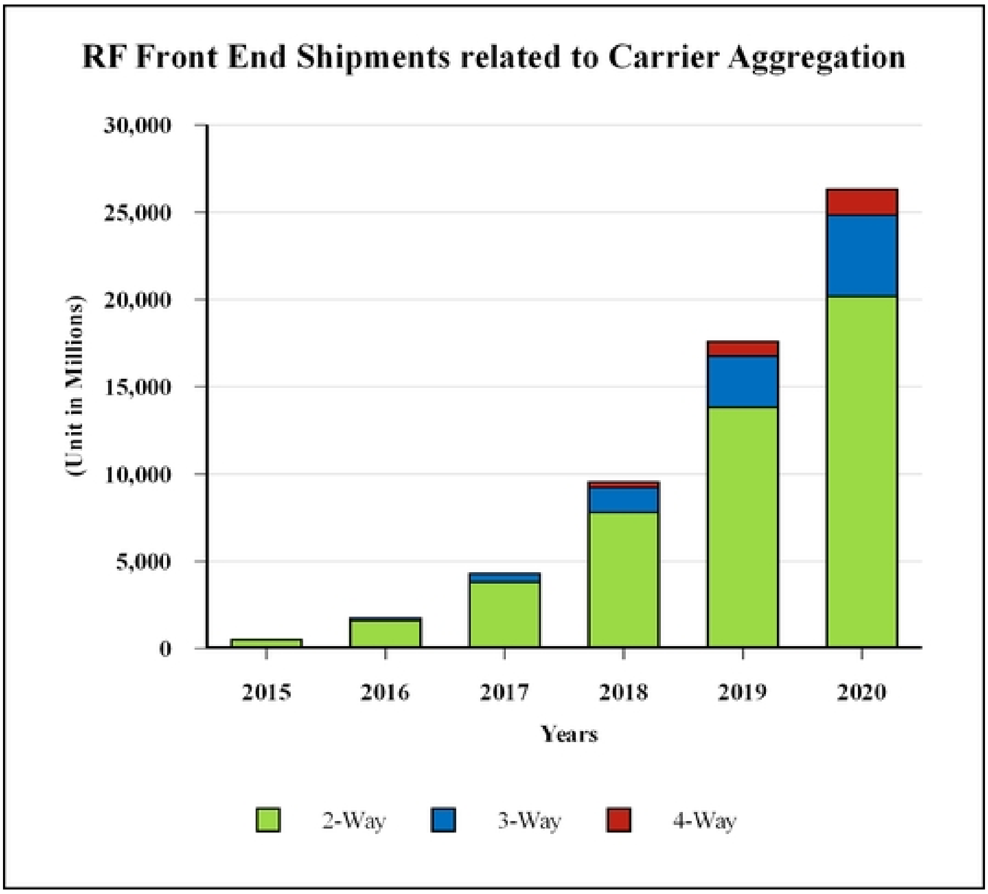

Figure 3-Projected growth of the market for mobile devices enabled for CA from 2015 through 2020 (in millions of units). *Source: Mobile Experts.*

Our Technology

RF front-end module companies currently produce filters internally or purchase filters from third-party manufacturers, such as Taiyo-Yuden, TDK-EPCOS, WISOL and Avago/Broadcom. These module companies and filter manufacturers design filters using their own internal resources, which are proving insufficient to meet the explosive growth in both total global filter demand and unique filter designs, as well as the increasingly complex filter requirements necessitated in part by crowded spectrum and carrier aggregation. We believe that our patented ISN technology will enable us to design complex filter products at approximately half the unit cost and in approximately half the time of traditional approaches. ISN can be summarized as a three-step process:

We synthesize RF acoustic devices. We have developed a large suite of proprietary mathematical methods and software tools that allow us to find better solutions because we can explore a much bigger set of possible solutions. Our ISN tools and methods draw upon a century of network synthesis techniques. In other words, rather than rely on a single design solution (the acoustic wave ladder that is used almost solely in this industry to date), we generate, or synthesize, large numbers of unique solutions specifically for each set of requirements. This allows us to create filters using existing manufacturing methods, such as SAW manufacturing methods, that perform as well as those using higher cost methods of BAWs. These synthesized solutions provide a framework for generating circuit models for optimization.

We use circuit models to optimize initial designs. Most of this industry models acoustic wave filters using a coupling-of-modes, or COM, model. In contrast, we use circuit models derived from the actual physics of acoustic wave filters. Circuit models are computationally much faster, which allows for very quick optimization of the many possible solutions that result from the synthesis process. We can quickly compare large numbers of different, optimized solutions before commencing the third step lengthy but highly accurate simulations based on fundamental methods.

We use fundamental models to simulate final designs. Our highly accurate models are based entirely on fundamental material properties and dimensions, again unlike common practice in this industry today. This allows for far fewer turns through the fab to reach the desired product performance. Because our models are fundamental, integration with our foundry and fab customers is eased due to the understanding of the fabs basic material properties and dimensions.

Our Plan of Commercialization

We plan to pursue filter design projects with potential customers and other strategic partners and we believe licensing our designs is the most direct and effective means of delivering our solutions to the market. These types of arrangements may subsidize filter design costs, as well as offer complementary technology and market intelligence. However, we intend to retain ownership of our technology, designs and related improvements and charge royalties based on sales of filters that incorporate our designs. We generally do not intend to manufacture or sell any physical products or operate as a contract design company developing designs for a fee. Our strategy is to establish and leverage alliances with new customers, who will help grow the market for our designs by integrating them with their own proprietary technology and products, thus combining their own particular strengths with ours to provide an extensive array of solutions and to develop and license filter designs that offer improvements in cost, size and performance of RF front-ends. The goal of our designs is to improve profit margins and increase market share for our customers.

Our customers are filter and module manufacturers. In the case of filter manufacturers' customers, our designs are produced using the manufacturer's own fabrication facilities and internal processes. For module company customers, we partner with a foundry to produce filters with our design. We will license specific, custom designs to these customers. Our plan is to charge royalties at a fixed amount per filter or as a percentage of sales price. We expect to generate substantially all of our revenues with these types of licensing arrangements. Each filter design and related royalty stream is expected to have a finite commercial life as mobile devices continue to evolve. Our plan is to offer our customers replacement designs as existing designs become obsolete.

We anticipate a significant delay between the start of a design and the start of royalty payments under a particular license. In some cases, we may grant the customer a limited period of exclusivity on a specific design or frequency band to enable the customer to be the first to market with the design. We do not expect any of these exclusivity provisions to have any long-term duration nor prevent us from concurrently working on filter designs in other bands for other customers.

Our products will be designed for manufacture with existing high-volume fabrication processes allowing rapid time to market, but we do not plan to manufacture or sell any physical components. Unlike a traditional manufacturing company, we intend to create designs for manufacturers eliminating for us the costs and problems associated with manufacturing and inventory. This allows us to concentrate on our unique expertise, leaving the hardware manufacturers to drive their own economies of scale.

Single Band Designs

We continue to develop a series of SAW filter designs for RF frequency bands presently dominated by the larger and more expensive BAW filters. We completed our first single-band filter design (a duplexer) during the first quarter of 2015 with our first fab. We continue to develop other SAW filter designs for customers. Some of these filter designs are for duplexers that have historically been TC-SAWs or BAWs while others or for discrete SAW filters that may need improvements in performance, size or cost. We believe that, using our ISN technology combined with our experience and know-how, we can design innovative SAW filters that meet the performance requirements for many of these bands but at significantly less cost than that of BAW filters or even TC-SAW filters they would replace. We also believe that these single band filter designs, whether discrete existing SAWs or TC-SAW and BAWs designed as SAWs, are the earliest opportunity to revenues for us.

Multiplexer Designs

Wireless carriers worldwide are experiencing increasing demand for higher data speeds. CA allows multiple data streams from different frequencies to be added together to provide increased data rate for the mobile users. However, CA further complicates the required filter characteristics. During the fourth quarter of 2015, based upon requests from potential customers, we performed some initial investigations on the feasibility of designing multiplexers that would allow four RF paths (two transmit and two receive) to operate simultaneously, allowing CA for both receive and transmit paths. Quadplexers, (4-RF path multiplexer) as described above, enable CA on both receive and transmit paths and reduce the RF front-end complexity by removing the switches, but complexity of the filters themselves increase dramatically. We believe that our ISN technology is ideally suited to this difficult filter design problem that covers a wide frequency range with much more demanding performance requirements.

Although some band combinations for aggregation will not require multiplexers, we believe that multiplexers are the best solution for bands in close frequency proximity. We plan to develop a family of high performance multiplexers to address this growing market. Our initial designs will build on our experience from SAW single band designs.

Tunable or Reconfigurable Designs

We believe that our ISN technology will also enable us to produce tunable, or reconfigurable, filters. These reconfigurable filters are electronically programmed in real time for different RF frequency bands so that one filter can do the work of many and therefore replace multiple filters and significantly lower the cost and size of RF front-ends. We began work on a reconfigurable filter that reconfigures between two bands. Our initial designs use SAW filters and build on our expertise in SAW filter technology. We have advanced the design to initial parts which are currently being optimized. We are concurrently designing a filter reconfigurable between three bands. Several prospective customers have expressed interest in a prototype reconfigurable filter and our goal is to have demonstration parts that meet each of the individual band specifications and performance requirements. We plan to make these parts available for assessment by these prospective customers with the goal of securing a lead customer thereafter. The design of a reconfigurable filter has not ever been commercialized for use in the RF front end and there can be no assurance that we can ever design a reconfigurable filter that meets the necessary specifications and performance criteria to become a commercial filter design nor that any prospective customer will be interested in advancing the design.

Our immediate focus is to address the problems in the RF front-end with innovative single-band, multiplex and reconfigurable designs made possible with our ISN technology. These designs present the greatest near-term potential for commercialization of our ISN technology. We expect the trend towards spectrum proliferation, in addition to carrier aggregation, will require complex filter multiplexing. We believe our ISN technology will enable cost effective designs for these applications.

Intellectual Property

We have an active program protecting our proprietary technology through the filing of patents. Our patent portfolio reflects both the initial technology contribution of STI, as well as our own patent filings since our founding. We have plans to file additional patents this year.

Our patent portfolio comprises more than 75 issued and pending patents. This patent portfolio relates primarily to the following subject matter:

- filter circuit structures and topologies;
- filter synthesis and design methods; and
- resonator structures.

We also have an active and ongoing program to identify, protect and commercialize our intellectual property. This program includes the development of a comprehensive patent strategy. We routinely use specialized outside firms to assist in these endeavors. These firms assist with invention identification, intellectual property strategy and competitive landscape analysis.

Our research has not identified any public information, such as patents or published articles, relating to our technology that would affect our freedom to operate. However, there can be no assurance that our pending patent applications or any future patent applications will be approved or will not be challenged successfully by third parties, that any issued patents will protect our technology or will not be challenged by third parties, or that the patents of others will not have an adverse effect on our ability to do business. Furthermore, there can be no assurance that others will not independently develop similar or competing technology or design around any patents that have been or may be issued to us.

We also rely on trademark, copyright and trade secret laws to protect our intellectual property. We have registered U.S. trademarks for ‘‘Resonant,’’ ‘‘ISN” and “Integrated Synthesized Networks.’’ We protect our trade secrets and other proprietary information by requiring confidentiality agreements from all our employees, consultants and third parties having access to such information. Despite these efforts, there can be no assurance that others will not gain access to our trade secrets, or that we can meaningfully protect our technology. In addition, effective trademark, copyright and trade secret protection may be unavailable or limited in certain foreign countries. Although we intend to protect our rights vigorously, there can be no assurance that such measures will be successful.

Competition

We differentiate ourselves from traditional filter designers and manufacturers in two primary ways. First, to our knowledge we are the only company with a stated business model and technical team, exclusively focused on RF front end filters. Second, we have spent many years developing ISN®, our own patented suite of design tools specifically for this purpose. In this respect, we believe we offer our customers a novel solution to the need for increasingly complex filter designs developed by an independent, stand-alone company that is not presently offered by any of our competitors.

We have advantages that we believe present significant barriers to entry for potential competitors that desire to replicate our business model:

- a large and growing portfolio of patents;
- a suite of proprietary software design tools;
- a highly experienced design team; and
- a multi-year technology lead.

We do compete with the existing filter designs and design capabilities of some of our target customers and their filter manufacturers. These companies include, among others, RF module companies like Skyworks Solutions Inc., Qorvo, Inc., Avago Technologies Limited, and Murata Manufacturing Co., Ltd. and filter designers and manufacturers such as TDK Epcos, Taiyo Yuden, and WISOL as well as other RF front-end component manufacturers. We must demonstrate to our target customers and their filter manufacturers that switching to our designs will give them a competitive advantage by providing market entry or sufficiently improving the cost, size, and performance of their current products to justify our royalty rates.

The use of our patented ISN tools, not only enables our lower cost and smaller size SAW solutions for single band and multiplexer designs but also enables our current development of reconfigurable filters that, if successful will offer a new, highly competitive solutions to many of the challenges facing the manufacturers of RF front end modules. While previous attempts by others to develop reconfigurable, or tunable, filters have proven unsuccessful in meeting the performance requirements of the RF front-end market, we believe our ISN technology has the potential to enable the development of a commercially viable reconfigurable filter that will provide us with an additional competitive advantage.

Employees

We have twenty-seven employees. Our three founders divide their time between filter designs and administrative matters. We have eighteen other employees on our technical staff and nine other employees devoted to finance, marketing and administrative matters. We also use several outside consultants.

Our principal executive offices are located at 110 Castilian Drive, Suite 100, Goleta, California 93117, and our telephone number is 805-308-9803. Our website address is www.resonant.com. The information contained on, or that can be accessed through, our website is not a part of this report.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Form 10-K, including our consolidated financial statements and related notes, before investing in our common stock. If any of the following risks materialize, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Our Industry

We will require additional capital to continue operations beyond the second quarter of 2016, which capital may not be available on terms acceptable to us, if at all.

Our principal sources of liquidity as of December 31, 2015 consist of existing cash balances and investments of $5.5 million. Currently, we are using approximately $2.3 million in cash per quarter in operating activities excluding fixed asset purchases and investments in patents. Due to these conditions, substantial doubt exists as to our ability to continue as a going concern. We believe our current resources will provide sufficient funding for planned operations through the second quarter of 2016. We have determined that additional capital from the sale of equity securities or the incurrence of indebtedness will be required for us to continue operations beyond the second quarter of 2016. We are in discussions with potential investors to provide us with equity funding. We also continue to have discussions with potential lenders, potential customers and/or strategic corporate partners that may provide funding to us through debt instruments or the licensing of future filter designs or development projects. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to potential customers or other investors, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to the continued listing requirements of NASDAQ. If we cannot raise needed funds, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a company.

We have a history of operating losses and we may never achieve or maintain profitability or positive cash flows.

We have a limited operating history and only a preliminary business plan upon which investors may evaluate our prospects. We have never generated revenues and we have a history of losses from operations with an accumulated deficit as of December 31, 2015 of $30.9 million. Our operations have been funded with initial capital contributions, proceeds from the sale of equity securities and debt. We intend to continue to make investments to support our business growth and will require additional funds to respond to business challenges, including the need to develop new technology, improve our operating infrastructure or acquire complementary businesses and technologies. Our ability to generate revenues and achieve profitability and, ultimately, positive cash flows, may depend on whether we can obtain additional capital when we need it and will depend on whether we complete the development of our technology and find customers who will license our designs. There can be no assurance that we will ever generate adequate revenues to achieve profitability and positive cash flows.

Our business model is based on licensing filter designs, which is unproven. Historically, our target customers have relied on their own filter designs or purchased finished filters from a manufacturer, and have not licensed third-party designs. Consequently, we may not succeed in our licensing strategy, which would require us to adopt a new business model and would have a material adverse effect on our potential for generating revenues and potentially threaten our viability.

Our business model is based on licensing our proprietary filter designs. We do not intend to manufacture or sell any physical products or operate as a contract design company developing designs for a fee. We believe licensing our designs is the most direct and effective means of delivering our solutions to the market. We intend to retain ownership of our designs and charge royalties based on sales of RF front-end modules that incorporate our designs.

Our target customers either make part or all of the RF front-end. These customers have historically used their own filter designs or purchased finished filters from a manufacturer. Our business model is new to the filter industry, and we may encounter resistance to our licensing strategy. The failure of our business model would have a material adverse effect on our potential for generating revenues and potentially threaten our viability.

We may not be able to complete a design that meets our customers' specifications. Even if we succeed in developing a design that meets all of a customers' specifications, the customers could decline to use our designs in their products. Further, our customers' product could fail in the marketplace. Any of these events would have a material adverse effect on our business and potentially threaten our viability.

We are currently working on filter designs for several customers that have given us stringent performance specifications. If successfully developed, our designs will compete against other technologies for inclusion in our customers' products. Our customers' final products will then compete against other products and technologies for inclusion in mobile devices in the marketplace. There can be no assurance that we can complete our designs or that our final designs will have acceptable performance and meet our customers' specifications. Even if our filter designs have acceptable performance, there are a number of other considerations influencing the customer's decision whether to use our design, such as packaging type and manufacturing cost, many of which are beyond our control. The decision to use our designs is solely within our customers' discretion. For example, we completed our first duplexer design for Band 3 in July 2015 that we believe delivers competitive performance relative to other comparable Band 3 products, nonetheless our first customer declined to license the design. While we continue to provide this Band 3 filter design to customers for evaluation, there is no assurance that our design will ever be licensed. Further, if our filter design is selected by a customer for inclusion in its design or product, there is no guarantee that the customer's design or product will be selected for inclusion in mobile devices. The failure to be selected at the design stage or the device stage would have a material adverse effect on our business and potentially threaten our viability.

We are not a filter manufacturer thus we are required to fabricate our duplexer designs by filter fabricators or manufacturers. For some of our customers that will not manufacture our design themselves, we may be required to have our customer approve the filter manufacturer, and the customer will not license our design unless the manufacturer can demonstrate the ability to economically produce the duplexer design in large volumes.

We believe our designs can be manufactured using existing technology, but we will be dependent on the manufacturer's filter fabrication processes and capabilities for our filter designs. Even if we successfully design a fully compliant duplexer, the customer will not license our design unless the manufacturer can demonstrate the ability to economically produce the design in large volumes. We do not have any control over the manufacturer. We cannot assure you that the manufacturer will have the necessary technology, skills and resources to successfully manufacture of our design in commercial quantities.

Our SAW-based circuit designs will be complex and may prove difficult to manufacture in commercial quantities. We will be relying on our customers and filter fabricators or manufacturers to build our designs. Our business could fail if they encounter difficulties manufacturing our designs in commercial quantities.

We are developing complex RF circuit designs, which is inherently challenging. We have only manufactured one of our designs in small commercial quantities and our other filter designs have only been manufactured as initial prototypes. Furthermore, we will be relying on our customers and filter fabricators or manufactures to manufacture our designs. They will need to manufacture our designs in commercial quantities at an acceptable cost, and we will have little or no control over the manufacturing process. They must also operate and maintain sophisticated manufacturing equipment, and equipment failures can have adverse consequences on production volumes and schedules. They may encounter difficulties in scaling up production of our designs currently in development or other future designs, including problems with quality control and assurance, raw material and component supply shortages, increased costs, shortages of qualified personnel and/or difficulties associated with compliance with regulatory requirements. Any of these problems may adversely affect the timing and amount of our future revenues. Additionally, if our customers and their suppliers encounter difficulties manufacturing our designs in commercial quantities, our business could fail.

Our business success relies on manufacturers to fabricate our circuit designs, and market acceptance of our designs could be adversely affected if the manufacturers decline to manufacture our designs.

We are a filter design company and will not commercially manufacture any products. Our business model contemplates licensing our designs to customers, who will manufacture our circuit designs themselves or rely on third party manufacturers, commonly referred to as fab houses, to fabricate our circuit designs for integration into the customer's overall product. Many fab houses offer potentially competitive filter technology as part of their standard product line or offer the services of in-house design teams which may consider us competition. In this case, our customers may face resistance by their fab houses to manufacture our designs. We believe the economics can be structured to make it attractive to the fab houses to manufacture our designs for our potential customers but we cannot be assured of the success in convincing them of the value of manufacturing our designs. The reluctance of fab houses to manufacture our designs could adversely affect the market acceptance of our designs.

We develop and test our designs under laboratory conditions using low volume production samples. Once in production, our designs may not perform as well or prove reliable due to manufacturing variations and operating conditions. This could adversely affect our business.

We develop and test our designs under laboratory conditions using low volume production samples. The transition from product development to commercial production requires high volume manufacturing which introduces product variations. These variations can adversely affect performance and reliability. Similarly, our designs may not perform as well or prove sufficiently reliable under actual operating conditions. This could adversely affect our business.

We are actively working on filter designs with, and expect to derive all of our revenues from, a small number of customers. Our failure to retain or expand customer relationships will have an adverse effect on our revenues.

We are currently working on filter designs with only a small number of customers. None of our customers has agreed to license our technology, and they may decide not to continue their relationship with us. We expect to derive our revenues from a small number of customers. Our revenues may fluctuate significantly in the future should we develop our technology and enter into new customer relationships. Our failure to retain or expand customer relationships, or any problems we experience in collecting receivables from them, would harm our financial condition and results of operations. Additionally, our industry is experiencing consolidation among suppliers and manufacturers of RF front-end components and modules, including as module suppliers vertically integrate by acquiring component suppliers and fabs. This may lead to fewer customers and reduced demand for our designs and replacement of our designed products by the combined entity with those of our competitors, each of which could adversely affect our business, financial condition and results of operations.

We plan to be a design firm licensing our filter circuit designs to manufacturers of RF front-ends for mobile devices. If our circuit designs do not achieve widespread market acceptance among RF front-end manufacturers, we will not be able to generate the revenue necessary to support our business.

Achieving acceptance among RF front-end manufacturers of our circuit designs will be crucial to our continued success. We have no history of marketing circuit designs and we may fail to generate significant interest in our initial commercial circuit designs or any other circuit designs we may develop. These and other factors may affect the rate and level of market acceptance, including:

- our royalty fees and the cost of our designed filters relative to other competing designs and technologies;
- perception by RF front-end manufacturers and mobile device manufacturers;
- press and blog coverage, social media coverage, and other publicity and public relations factors which are not within our control; and
- regulatory developments related to manufacturing, marketing and selling our designs.

If we are unable to achieve or maintain market acceptance, our business would be harmed.

The complexity of our designs could result in unforeseen delays or expenses from latent defects that could reduce the market acceptance for our designs damage our reputation with prospective customers and adversely affect our future revenues and operating costs.

We are developing highly complex filters designs using a new approach. We have not previously produced any designs that have gone into commercial production and therefore cannot be certain our methods and testing procedures are adequate to detect latent design defects. If any of our designs contain latent defects, we may be unable to correct these problems. Consequently, our reputation may be damaged and customers may be reluctant to buy our designs, which could harm our ability to attract customers and negatively impact our financial results. These problems may also result in claims against us by our customers or others.

Our designs may not gain widespread acceptance unless they offer greater benefits to our customers than offered by competing RF filter designs.

RF front-end manufacturers are primarily concerned with the cost, size and performance of RF filters. Our designs may not gain widespread acceptance unless, as compared to competing RF filter designs, they are smaller in size, can be fabricated at reduced cost or improve performance. There can be no assurance that our surface acoustic wave, or SAW, filter designs will cost sufficiently less to manufacture than existing bulk acoustic wave, or BAW, filters, or that our tunable filter designs can replace a sufficient number of conventional filter designs, to prove economically attractive to RF front-end manufacturers or that our filter designs will be smaller in size or perform better.

Our technologies are not yet verified in practice or on a commercial scale.

Our technologies have not been tested in a commercial setting or on a commercial scale. There is no assurance that we will be able to fully develop or license our proposed designs on a timely basis, or at all.

Our industry is subject to intense competition and rapid technological change, which may result in circuit designs, products or new solutions that are superior to our designs under development. If we are unable to anticipate or keep pace with changes in the marketplace and the direction of technological innovation and customer demands, our designs may become less useful or obsolete and our operating results will suffer.

We operate in an industry which is subject to intense and increasing competition and rapidly evolving technologies. Because our designs are expected to have long development cycles, we must anticipate changes in the marketplace and the direction of technological innovation and customer demands. To compete successfully, we will need to demonstrate the advantages of our designs and technologies.

Our future success will depend in large part on our ability to establish and maintain a competitive position in current and future technologies. Rapid technological development may render our designs under development, or any future designs we may have, and its technologies obsolete. Many of our competitors have or may have greater corporate, financial, operational, sales and marketing resources, and more experience in research and development than we have. We cannot assure you that our competitors will not succeed in developing or marketing technologies or products that are more effective or commercially attractive than our designs or that would render our technologies and designs obsolete. We may not have or be able to raise or develop the financial resources, technical expertise, or support capabilities to compete successfully in the future. Our success will depend in large part on our ability to maintain a competitive position with our technologies.

If our principal end markets fail to grow or experience declines, our net revenue may not meet our business plan expectations.

According to our business plan, our initial circuit designs will be incorporated into mobile wireless devices. Accordingly, demand for our designs is dependent on the ability of mobile wireless device manufacturers to successfully sell wireless devices that incorporate our designs. We cannot be certain whether these manufacturers will be able to create or sustain demand for their wireless devices that contain our designs or how long they will remain competitive in their business, if at all. The success of these mobile wireless device manufacturers and the demand for their wireless devices can be affected by a number of factors, including:

- market acceptance of their mobile wireless devices that contain our designs;
- the impact of slowdowns or declines in sales of mobile wireless devices in general;
- their ability to design products with features that meet the evolving tastes and preferences of consumers;
- fluctuations in foreign currency;
- relationships with wireless carriers in particular markets;
- the implementation of, or changes to, mobile wireless device certification standards and programs;
- technological advancements in the functionality and capabilities of mobile wireless devices;
- the imposition of restrictions, tariffs, duties, or regulations by foreign governments on mobile wireless device manufacturers;
- failure to comply with governmental restrictions or regulations;
- cost and availability of components for their products; and
- inventory levels in the sales channels into which mobile wireless device manufacturers sell their products.

Our proprietary rights may be difficult to enforce, which could enable others to copy or use aspects of our intellectual property without compensating us, thereby eroding our competitive advantages and harming our business.

Our success depends, in part, on our ability to protect proprietary methods and technologies that we develop under the intellectual property laws of the United States, so that we can prevent others from using our inventions and proprietary information. If we fail to protect our intellectual property rights adequately, our competitors might gain access to our technology, and our business might be adversely affected. We rely on trademark, copyright, trade secret and patent laws, confidentiality procedures and contractual provisions to protect our proprietary methods and technologies. We currently hold several patents and have pending patent applications related to our technology solutions. Valid patents may not be issued from our pending applications, and the claims allowed on any issued patents may not be sufficiently broad to protect our technology or offerings and services. Any patents we currently hold or that may be issued to us in the future may be challenged, invalidated or circumvented, and any rights granted under these patents may not actually provide us with adequate defensive protection or competitive advantages. Additionally, the process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner.

Policing unauthorized use of our technology is difficult. Additional uncertainty may result from changes to intellectual property legislation enacted in the United States, including the recent America Invents Act, and other countries and from interpretations of the intellectual property laws of the United States and other countries by applicable courts and agencies. In addition, the laws of some foreign countries may not be as protective of intellectual property rights as those of the United States, and mechanisms for enforcement of our proprietary rights in such countries may be inadequate. From time to time, legal action by us may be necessary to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement. Such litigation could result in substantial costs and the diversion of limited resources and could negatively affect our business, operating results and financial condition. If we are unable to protect our proprietary rights (including aspects of our technology platform) we may find ourselves at a competitive disadvantage to others who have not incurred the same level of expense, time and effort to create and protect their intellectual property.

Furthermore, we acquired many of the patents we currently hold from Superconductor Technologies, Inc., or STI. Although we believe we have obtained valid assignments of patent rights from STI and STI has obtained valid assignments of patent rights from all inventors, if an inventor did not adequately assign his or her patent right to STI or STI did not adequately assign its patent rights to us, a third party could obtain a license to the patent from such inventor or STI. This could preclude us from enforcing the patent against such third party. In addition, because we acquired our patents from STI, some of the inventors of our patents are not our employees and they are not obligated to assist us in prosecuting, maintaining, defending and enforcing such patents. Without the cooperation of the inventors of our patents, it may be difficult for us to prevail in any legal action involving the intellectual property rights under our patents. Additionally, the inventors may have information, trade secrets and know-how learned while at STI that is not our property and if disclosed could provide competitors with insights that allow them to invent around our patented technology.

Accordingly, despite our efforts, we may be unable to obtain adequate patent protection, or to prevent third parties from infringing upon, misappropriating or inventing around our intellectual property.

We may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages and could limit our ability to use certain technologies.

Third parties may assert claims of infringement of intellectual property rights in proprietary technology against us for which we may be liable or have an indemnification obligation. Any claim of infringement by a third party, even those without merit, could cause us to incur substantial costs defending against the claim and could distract our management from our business.

Although third parties may offer a license to their technology, the terms of any offered license may not be acceptable and the failure to obtain a license or the costs associated with any license could cause our business, results of operations or financial condition to be materially and adversely affected. In addition, some licenses may be non-exclusive, and therefore our competitors may have access to the same technology licensed to us. Alternatively, we may be required to develop non-infringing technology, which could require significant effort and expense and ultimately may not be successful. Furthermore, a successful claimant could secure a judgment or we may agree to a settlement that prevents us from licensing certain circuit designs or performing certain services or that requires us to pay substantial damages, including treble damages if we are found to have willfully infringed the claimant’s patents or copyrights, royalties or other fees. Any of these events could seriously harm our business, operating results and financial condition.

Our customer agreements will likely include indemnity provisions and may expose us to substantial liability for intellectual property infringement and other losses.

Our customer agreements likely will include indemnification provisions under which we agree to indemnify third parties for losses suffered or incurred as a result of claims of intellectual property infringement, damages caused by us to property or persons, or other liabilities relating to or arising from our circuit designs, services, or other contractual obligations. The term of these indemnity provisions generally survives termination or expiration of the applicable agreement. Large indemnity payments could harm our business, operating results and financial condition.

We use highly specialized commercially available software pursuant to annual licenses, and the inability to renew any of these licenses could adversely affect our ability to design new RF filters and thus our potential for generating revenues.

In addition to our proprietary software, we also use highly specialized but commercially available computer software in our design process. We do not own this software and use it under the terms of annual licenses. These licenses are made available to us at prices and on terms generally available to any customer. If we were unable to renew any of these software licenses, we would have to locate or develop alternative software. We cannot assure you that suitable alternative software would be available on commercially reasonable terms or could be developed by us at reasonable cost. The loss any one of these software licenses could adversely affect our ability to produce new RF filter designs and thus our potential for generating revenues.

Our limited operating history makes it difficult to evaluate our business and prospects and may increase the risks associated with your investment.

We have only a limited operating history upon which our business and future prospects may be evaluated. We have encountered and will continue to encounter risks and difficulties frequently experienced by companies in rapidly developing and changing industries, including challenges related to recruiting, integrating and retaining qualified employees; making effective use of our limited resources; achieving market acceptance of our existing and future solutions; competing against companies with greater financial and technical resources; and developing new solutions. Our current operational infrastructure may require changes for us to scale our business efficiently with additional technical personnel and effectively to keep pace with demand for our solutions, and achieve long-term profitability. If we fail to implement these changes on a timely basis or are unable to implement them effectively, our business may suffer. We cannot assure you that we will be successful in addressing these and other challenges we may face in the future. As a company in a rapidly evolving industry, our business prospects depend in large part on our ability to:

- build a reputation for a superior solution and create trust and long-term relationships with our potential customers;
- distinguish ourselves from competitors in our industry;
- develop and offer a competitive technology that meet our potential customers' needs as they change;
- respond to evolving industry standards and government regulations that impact our business;
- expand our business internationally; and
- attract, hire, integrate and retain qualified and motivated employees.

If we are unable to meet one or more of these objectives or otherwise adequately address the risks and difficulties that we face, our business may suffer, our revenue may decline and we may not be able to achieve growth or long-term profitability.

Our management team and financial reporting group is limited in size and experience which may impact the implementation and administration of financial and reporting controls and procedures.

Although our management team makes certain representations about the financial and reporting controls and procedures in our offering documentation, our management team has limited experience in implementing and maintaining our operations and our financial processes. Financial and reporting controls and procedures implemented and maintained by our management team, now or in the future, may not be adequate, with the result that there may be substantial deficiencies that will need remediation in the future. If there are inadequate controls and procedures, our financial statements and our reporting may be inaccurate or untimely.

For example, during the third quarter of 2014, we identified a material weakness in our internal control over financial reporting relating to our lack of sufficient policies and procedures in the review of complex financial instruments and a clerical error in the computation of loss per share, which resulted in restatements to our financial statements included in our previously filed Quarterly Report on Form 10-Q for the period ended June 30, 2014. As a result, our internal control over financial reporting was not effective as of June 30, 2014 and September 30, 2014. While we have taken actions that we believe remediated the material weakness, we may again experience control and procedure deficiencies in the future. Investors may not wish to invest in a company with identified control and procedure deficiencies.

The loss of the services of our key management and personnel or the failure to attract additional key personnel could adversely affect our ability to operate our business.

A loss of one or more of our current officers or key employees could severely and negatively impact our operations. Specifically, the loss of the services of any of the following would be material to us: Terry Lingren, our Chief Executive Officer; Robert Hammond, our Chief Technology Officer; and Neal Fenzi, our Chief Operating Officer. We have no present intention of obtaining key-man life insurance on any of our executive officers or management. Additionally, competition for highly skilled technical, managerial and other personnel is intense. As our business develops, we might not be able to attract, hire, train, retain and motivate the highly skilled managers and employees we need to be successful. If we fail to attract and retain the necessary technical and managerial personnel, our business may not grow, may suffer and might fail.

We may have difficulty managing growth in our business.

Because of our small size, growth in accordance with our business plan, if achieved, will place a significant strain on our financial, technical, operational and management resources. As we expand our activities, there will be additional demands on these resources. The failure to continue to upgrade our technical, administrative, operating and financial control systems or the occurrence of unexpected expansion difficulties, including issues relating to our research and development activities and retention of experienced scientists, managers and engineers, could have a material adverse effect on our business, financial condition and results of operations and our ability to timely execute our business plan. If we are unable to implement these actions in a timely manner, our results may be adversely affected.

Our worldwide operations are subject to political, legal and economic risks and natural disasters, which could have a material adverse effect on us.

Our customers are located around the world, including in the United States and Asia, and we expect that international sales will comprise a significant portion of total sales in the future. In addition, products utilizing our designs will be produced, assembled and tested at third-party manufacturing facilities located primarily in Asia. Consequently, we are subject to political, legal and economic risks associated with operations in foreign countries, including, without limitation:

- expropriation;
- changes in a specific country's or region's political or economic conditions;
- changes in tax laws, trade protection measures and import or export licensing requirements;
- difficulties in protecting our intellectual property;
- difficulties in managing staffing and exposure to different employment practices and labor laws;
- changes in foreign currency exchange rates;
- restrictions on transfers of funds and other assets of our subsidiaries between jurisdictions;
- changes in freight and interest rates;
- disruption in air transportation between the United States and overseas facilities;
- loss or modification of exemptions for taxes and tariffs; and
- compliance with U.S. laws and regulations related to international operations, including export control and economic sanctions laws and regulations and the Foreign Corrupt Practices Act.

In addition, our worldwide operations (or those of our business partners) could be subject to natural disasters such as earthquakes, tsunamis, flooding, typhoons and volcanic eruptions that disrupt manufacturing or other operations. For example, our Goleta and Burlingame operations are located near major earthquake fault lines in California. Any conflict or uncertainty in the countries in which we operate, including public health issues, safety issues, natural disasters, fire, disruptions of service from utilities, nuclear power plant accidents or general economic or political factors, could have a material adverse effect on our business. Any of the above risks, should they occur, could result in an increase in the cost of components, production delays, general business interruptions, delays from difficulties in obtaining export licenses for certain technology, tariffs and other barriers and restrictions, longer payment cycles, increased taxes, restrictions on the repatriation of funds and the burdens of complying with a variety of foreign laws, any of which could ultimately have a material adverse effect on our business.

We manage our worldwide operations from our facilities in Goleta, California, which requires our sales and management teams.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below the expectations of securities analysts and investors, resulting in a decline in our stock price.

The preparation of financial statements in conformity with generally accepted accounting principles, or GAAP, requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in the section entitled "*Management's Discussion and Analysis of Financial Condition and Results of Operations*," the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Our operating results may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our operating results to fall below the expectations of securities analysts and investors, resulting in a decline in our stock price. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to the fair values of convertible debt instruments, derivative instruments, other financial instruments and income taxes.

Security breaches and improper access to or disclosure of our proprietary information, or other hacking attacks on our systems, could adversely affect our business.

Our industry is prone to cyber attacks, with third parties seeking unauthorized access to our proprietary information and technology. Computer malware, viruses, and hacking and phishing attacks by third parties have become more prevalent in our industry and may occur on our systems in the future. We believe such attempts are increasing in number and in technical sophistication, and in some instances we may be unable to anticipate these techniques or to implement adequate preventative measures. Additionally, we may be unaware of an incident or its magnitude and effects. Although we have developed systems and processes that are designed to protect our proprietary information and to prevent other cybersecurity breaches, we cannot guarantee that such measures will provide absolute security.

Any failure to prevent or mitigate security breaches and improper access to or disclosure of our proprietary information could result in the loss or misuse of such proprietary information, which could harm our business and diminish our competitive position. Such attacks may also create system disruptions or cause shutdowns. Publicity about vulnerabilities and attempted or successful incursions could damage our reputation with customers and reduce demand for our products and services.

Affected private parties or government authorities could initiate legal or regulatory actions against us in connection with any security breaches, which could cause us to incur significant expense and liability or result in orders or consent decrees forcing us to modify our business practices. Any of these events could have a material and adverse effect on our business, reputation, and operating results.

Changes in current laws or regulations or the imposition of new laws or regulations could impede the license of our designs or otherwise harm our business.

Wireless networks can only operate in the frequency bands, or spectrum, allowed by regulators and in accordance with rules governing how the spectrum can be used. The Federal Communications Commission, or the FCC, in the United States, as well as regulators in foreign countries, have broad jurisdiction over the allocation of frequency bands for wireless networks. We therefore will rely on the FCC and international regulators to provide sufficient spectrum and usage rules. For example, countries such as China, Japan or Korea heavily regulate all aspects of their wireless communication industries, and may restrict spectrum allocation or usage. If this were to occur, it would make it difficult for us to license our designs for use in mobile devices in that region.

Risks Relating to the Securities Markets and Ownership of Our Common Stock

A securities class action lawsuit and shareholder derivative lawsuit are pending against us and could have a material adverse effect on our business, results of operations and financial condition.

A putative class action lawsuit and shareholder derivative lawsuit are pending against us certain of our directors and officers, as described in *Item 3-Legal Proceedings*. These lawsuits may divert financial and management resources that would otherwise be used to benefit our operations. Although we deny the material allegations in the lawsuits and intends to defend ourselves vigorously, defending the lawsuits could result in substantial costs. No assurances can be given that the results of these matters will be favorable to us. An adverse resolution of any of these lawsuits could have a material adverse effect on our results of operations and financial condition. In addition, we may be the target of securities-related litigation in the future, both related and unrelated to the existing class action and shareholder derivative lawsuits. Such litigation could divert our management’s attention and resources, result in substantial costs, and have an adverse effect on our business, results of operations and financial condition.

We maintain director and officer insurance that we regard as reasonably adequate to protect us from potential claims; however, we cannot assure you that it will. Further, as a result of the pending litigation the costs of insurance may increase and the availability of coverage may decrease. As a result, we may not be able to maintain our current levels of insurance at a reasonable cost, or at all, which might make it more difficult to attract qualified candidates to serve as executive officers or directors of Resonant.

The price of our common stock may be volatile and the value of your investment could decline

Technology stocks have historically experienced high levels of volatility. The trading price of our common stock may fluctuate substantially, depending on many factors, some of which are beyond our control and may not be related to our operating performance. These fluctuations could cause you to lose all or part of your investment in our common stock. Factors that could cause fluctuations in the trading price of our common stock include the following:

- the progress, completion or failure of efforts to design our first commercial duplexer;
- a customer decision regarding incorporation of our first duplexer design into a commercial product;
- the loss of any customer relationship;
- the addition of a new customer relationship;

- mergers and acquisitions involving us, our customers or our competitors;
- price and volume fluctuations in the overall stock market from time to time;
- significant volatility in the market price and trading volume of technology companies in general;
- fluctuations in the trading volume of our shares or the size of our public float;
- actual or anticipated changes or fluctuations in our results of operations;
- whether our results of operations meet the expectations of securities analysts or investors;
- actual or anticipated changes in the expectations of investors or securities analysts;
- litigation involving us, our industry, or both;
- regulatory developments in the United States, foreign countries, or both;
- general economic conditions and trends;
- major catastrophic events;
- lockup releases, sales of large blocks of our common stock;
- departures of key employees; or
- an adverse impact on the company from any of the other risks cited herein.

In addition, if the market for technology stocks or the stock market, in general, experience a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, results of operations or financial condition. The trading price of our common stock might also decline in reaction to events that affect other companies in our industry even if these events do not directly affect us. Securities class action litigation has often been instituted against companies following periods of volatility in the overall market and in the market price of a company's securities. Two putative class action lawsuits were filed in March 2015 against the Company and certain of our members of the Board of Directors and executives, as described in "Item 3-Legal Proceedings." In addition, we may be the target of securities-related litigation in the future, both related and unrelated to the existing class action lawsuits. Such litigation could divert our management's attention and resources, result in substantial costs, and have an adverse effect on our business, results of operations and financial condition.

Insiders have substantial control over us, which could limit your ability to influence the outcome of key transactions, including a change of control.

Our directors, executive officers and each of our stockholders who own greater than 5% of our outstanding common stock, in the aggregate, beneficially own approximately 42.7% of the outstanding shares of our common stock as of December 31, 2015. As a result, these stockholders will be able to influence or control matters requiring approval by our stockholders, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. They may also have interests that differ from yours and may vote in a manner that is adverse to your interests. This concentration of ownership may have the effect of deterring, delaying or preventing a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

The requirements of being a public company may strain our resources, divert our management's attention and affect our ability to attract and retain qualified board members.

As a public company, we are subject to the reporting requirements of the Exchange Act, and are required to comply with the applicable requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The NASDAQ Stock Market and other applicable securities rules and regulations. Compliance with these rules and regulations have increased our legal and financial compliance costs, made some activities more difficult, time-consuming or costly and increased demand on our systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly and current reports with respect to our business and results of operations and maintain effective disclosure controls and procedures and internal controls over financial reporting. In order to maintain and, if required, improve our disclosure controls and procedures and internal controls over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could harm our business and results of operations. Although we have already hired additional employees to comply with these requirements, we may need to hire even more employees in the future, which will increase our costs and expenses.

In addition, we expect that these new rules and regulations will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

We are an "emerging growth company," and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.

For so long as we remain an "emerging growth company" as defined in the JOBS Act, we may take advantage of certain exemptions from various requirements that are applicable to public companies that are not "emerging growth companies," including not being required to comply with the independent auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We may take advantage of these exemptions for so long as we are an "emerging growth company," which could be as long as five years following the completion of our initial public offering. Investors may find our common stock less attractive because we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

In addition, Section 107 of the JOBS Act also provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. However, we chose to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates adoption of such standards is required for non-emerging growth companies. Our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

We will remain an emerging growth company until the earliest of (a) the last day of our fiscal year during which we have total annual gross revenue of at least $1.0 billion; (b) the last day of our fiscal year following the fifth anniversary of the completion of our initial public offering; (c) the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt; or (d) the date on which we are deemed to be a "large accelerated filer" under the Securities Exchange Act of 1934, as amended, which would occur if the market value of our stock that are held by non-affiliates exceeds $700 million as of the last business day of our most recently completed second fiscal quarter. Once we cease to be an emerging growth company, we will not be entitled to the exemptions provided in the JOBS Act.

We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002, and any adverse results from such evaluation could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management on our internal control over financial reporting. Such report contains, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. If we are unable to assert that our internal control over financial reporting is effective, we could lose investor confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on our stock price.

During the third quarter of 2014, we identified a material weakness in our internal control over financial reporting relating to our lack of sufficient policies and procedures in the review of complex financial instruments and a clerical error in the computation of loss per share, which resulted in restatements to our financial statements included in our previously filed Quarterly Report on Form 10-Q for the period ended June 30, 2014. As a result, our internal control over financial reporting was not effective as of June 30, 2014 and September 30, 2014. While we have taken actions that have remediated the material weakness, we may again experience control and procedure deficiencies in the future.

Our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting until the later of the date we are an accelerated filer or large accelerated filer, or the date we are no longer an "emerging growth company." At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating. Our remediation efforts may not enable us to avoid a material weakness in the future.

If securities or industry analysts do not publish research or reports about our business, or publish inaccurate or unfavorable research reports about our business, our share price and trading volume could decline.

The trading market for our common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares or change their opinion of our business prospects, our share price would likely decline. If one or more of these analysts ceases coverage of our company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We do not intend to pay dividends for the foreseeable future and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We have never declared or paid any dividends on our common stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the future. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock increases.

Our charter documents and Delaware law could discourage takeover attempts and lead to management entrenchment.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors that are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of our board of directors, the chief executive officer, the president (in the absence of a chief executive officer) or a majority vote of our board of directors, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least 66-2/3% of the voting power of all of the then-outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the management of our business or our amended and restated bylaws, which may inhibit the ability of an acquirer to effect such amendments to facilitate an unsolicited takeover attempt;
- the ability of our board of directors, by majority vote, to amend our amended and restated bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquirer to amend our amended and restated bylaws to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time.

Risks Related to Government Regulation

Our failure to comply with U.S. laws and regulations relating to the export and import of goods, technology, and software could subject us to penalties and other sanctions and restrict our ability to license and develop our circuit designs.

We are obligated by law to comply with all U.S. laws and regulations governing the export and import of goods, technology, and services, including the International Traffic in Arms Regulations, or ITAR, the Export Administration Regulations, or EAR, regulations administered by the Department of Treasury's Office of Foreign Assets Control, and regulations administered by the Bureau of Alcohol Tobacco Firearms and Explosives governing the importation of items on the U.S. Munitions Import List. Pursuant to these regulations, we are responsible for determining the proper licensing jurisdiction and export classification of our circuit designs, and obtaining all necessary licenses or other approvals, if required, for exports and imports of technical data, and software, or for the provision of technical assistance or other defense services to or on behalf of foreign persons. We are also required to obtain export licenses, if required, before employing or otherwise utilizing foreign persons in the performance of our contracts if the foreign person will have access to export-controlled technical data or software. The violation of any of the applicable laws and regulations could subject us to administrative, civil, and criminal penalties.

These regulations could restrict our ability to license existing circuit designs and develop new designs. For example, as a result of ITAR requirements, we are unable to supply certain products to China satellite companies or end users, which comprise a significant part of the overall satellite market. Changes in our designs or changes in export and import regulations may create delays in the introduction of our designs in international markets, prevent our customers with international operations from deploying products incorporating our designs throughout their global systems or, in some cases, prevent the export or import of product including our designs to certain countries altogether. Any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons, or technologies targeted by such regulations, could result in decreased use of our designs by, or our ability to export or license our designs to, existing or potential customers with international operations and decreased revenue. Additionally, failure to comply with these laws could result in sanctions by the U.S. government, including substantial monetary penalties, denial of export privileges, and debarment from government contracts.

If we fail to comply with anti-bribery laws, including the U.S. Foreign Corrupt Practices Act, or FCPA, we could be subject to civil and/or criminal penalties.

As a result of our potential international operations, we may be subject to anti-bribery laws, including the FCPA, which prohibits companies from making improper payments to foreign officials for the purpose of obtaining or keeping business. If we fail to comply with these laws, the U.S. Department of Justice, the Securities and Exchange Commission, or SEC, or other U.S. or foreign governmental authorities could seek civil and/or criminal sanctions, including monetary fines and penalties against us or our employees, as well as additional changes to our business practices and compliance programs, which could have a material adverse effect on our business, results of operations, or financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We maintain our principal office, totaling approximately 5,500 square feet of office and laboratory space, in Goleta, California under a lease that expires in July 2017 and provides us with an option for an additional three years. We lease an additional 1,800 square feet of office space in Burlingame, California under a lease that expires in November 2016. This facility is a satellite office and is used by several members of our technical team resident in the San Francisco Bay area. We believe our current facilities will be adequate through the second quarter of 2016. We believe that suitable additional space will be available to accommodate our planned growth.

ITEM 3. LEGAL PROCEEDINGS

Beginning on March 17, 2015, three putative class action lawsuits were filed in the United States District Court for the Central District of California, naming us, Terry Lingren and John Philpott as defendants. The three lawsuits were consolidated into a single putative class action, *In re Resonant Inc. Securities Litigatio*n, Case No. 15-cv-01970 SJO (VBKx), and the court appointed co-lead plaintiffs. On September 26, 2015, the plaintiffs filed a consolidated complaint purporting to assert claims under the federal securities laws against us, Terry Lingren, John Philpott, and the underwriter of our May 29, 2014 IPO. On November 30, 2015, we filed a motion to dismiss the plaintiffs' Consolidated Amended Complaint. In an order dated February 8, 2016, the court granted our motion to dismiss, but granted the plaintiffs leave to file a second amended complaint. On February 23, 2016, the plaintiffs filed a consolidated second amended complaint purporting to assert claims under the federal securities laws against us, Terry Lingren, John Philpott, and the underwriter of our May 29, 2014 IPO. The plaintiffs purport to be acting on behalf of a class consisting of purchasers or acquirers of our common stock between November 6, 2014 and April 2, 2015, or the Class Period, as well as a class of persons or entities who purchased or acquired our shares in (or traceable to) our IPO. The plaintiffs allege that, as a result of the defendants' allegedly false and/or misleading statements and/or omissions concerning our business, operations, prospects and performance, our common stock traded at artificially inflated prices throughout the Class Period. The plaintiffs seek compensatory damages and fees and costs, among other relief, but have not specified the amount of damages being sought in the action. On March 22, 2016, we filed a motion to dismiss the consolidated second amended complaint. It is not known when the court will rule on the motion.

On September 24, 2015, a purported shareholder derivative action was filed in the United States District Court for the Central District of California, and is pending before the same federal district court judge to whom the putative class action has been assigned. In the derivative action, the plaintiffs allege that certain of our officers and directors breached their fiduciary duties to us by violating the federal securities laws and exposing us to possible financial liability. On November 16, 2015, the court entered an order staying the proceedings in the shareholder derivative action pending certain further developments. We intend to continue to defend ourselves vigorously in these actions.

We are not party to any other legal proceedings. We may, from time to time, be party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of any future matters could materially affect our future financial position, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information for Common Stock

Our common stock has been listed on the NASDAQ Capital Market under the symbol 'RESN" since May 29, 2014. Prior to that date, there was no public trading market for our common stock. The following table sets forth for the periods indicated the high and low sale prices per share of our common stock as reported on the NASDAQ Capital Market:

	High	Low
Fiscal 2014		
Second Quarter (from May 29, 2014)	$ 11.54	$ 7.25
Third Quarter	$ 8.24	$ 6.02
Fourth Quarter	$ 12.00	$ 4.93
Fiscal 2015		
First Quarter	$ 19.86	$ 7.05
Second Quarter	$ 7.52	$ 2.84
Third Quarter	$ 5.75	$ 1.93
Fourth Quarter	$ 4.84	$ 2.51

On March 22, 2016, the last reported sale price of our common stock on the NASDAQ Capital Market was $3.06 per share.

Holders of Record

As of December 31, 2015, we had 49 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees.

Dividend Policy

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future, if at all. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Recent Sale of Unregistered Securities

None.

Use of Proceeds

On June 3, 2014, we closed our initial public offering of 3,105,000 shares of our common stock, which included 405,000 shares of common stock sold upon the full exercise of the underwriter's overallotment option. The offer and sale of all of the shares in the initial public offering were registered under the Securities Act pursuant to registration statements on Form S-1 (File Nos. 333-193552 and 333-196340), which were declared effective by the SEC on May 28, 2014. MDB Capital Group, LLC acted as the underwriter for the offering. The public offering price of the shares sold in the offering was $6.00 per share. The total gross proceeds from the offering to us were $18.6 million. After deducting underwriting discounts and commissions of $1.6 million and offering expenses payable by us of $0.8 million, we received approximately $16.2 million. There has been no material change in the planned use of proceeds from our initial public offering as described in our final prospectus filed with the SEC on May 29, 2014 pursuant to Rule 424(b) of the Securities Act.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the consolidated financial statements and the related notes to the consolidated financial statements included later in this Annual Report on Form 10-K. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, beliefs and expectations that involve risks and uncertainties. Our actual results and the timing of events could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in "Risk Factors" and "Special Note Regarding Forward-Looking Statements."

Overview

Resonant is a late-stage development company creating innovative filter designs for radio frequency, or RF, front-ends for the mobile device industry. The RF front-end is the circuitry in a mobile device responsible for analog signal processing and is located between the device's antenna and its digital baseband. We use a fundamentally new technology called Infinite Synthesized Networks®, or ISN®, to configure and connect resonators, the building blocks of RF filters. Filters are a critical component of the RF front-end used to select desired radio frequency signals and reject unwanted signals. We are using ISN to develop new classes of filter designs.

Our inception date is May 29, 2012. We commenced business on July 6, 2012 and completed our initial public offering, or IPO, on May 29, 2014, or IPO Date.

We plan to commercialize our technology by creating filter designs that address the problems created by the growing number of frequency bands in the RF front-end of mobile devices. We are developing a series of single-band surface acoustic wave, or SAW, filter designs for frequency bands presently dominated by larger and more expensive bulk acoustic wave, or BAW, filters. We are also developing multiplexer filter designs for 2 or more bands to address the carrier aggregation, or CA, requirements of our customers. Finally, we are developing reconfigurable filter designs to replace multiple filters for multiple bands. In order to succeed, we must convince RF front-end suppliers that our filter designs can significantly reduce the size and cost of their products.

We continued to make progress during 2015 in the development of our technology in all areas of RF filter design. We have completed the development of a single-band filter design (a duplexer) that currently is being qualified by a third-party fab, and we have several other single-band filter designs in various stages of development and commercialization. In the fourth quarter of 2015, we began to investigate the feasibility of using our technology to design multiplexers to address the complexities of carrier aggregation, and have commenced the initial design parameters for a couple of potential multiplexers. During 2015, we produced initial parts for a reconfigurable filter that reconfigures between two bands, which parts are currently being optimized, and commenced development of a filter reconfigurable between three bands.

We believe licensing our designs is the most direct and effective means of delivering our solutions to the market. Our target customers make part or all of the RF front-end. We intend to retain ownership of our designs, and we expect to be compensated through license fees and royalties based on sales of RF front-end filters that incorporate our designs. We currently do not intend to manufacture or sell any physical products or operate as a contract design company developing designs for a fee.

We anticipate a significant delay between the start of a design and the start of royalty payments under a particular license. In some cases, we may grant the customer a limited period of exclusivity on a specific design or frequency band to enable the customer to be the first to market with the design. We do not expect any of these exclusivity provisions to have any long-term duration nor prevent us from concurrently working on filter designs in other bands for other customers.

We plan to pursue filter design projects with potential customers and other strategic partners. These types of arrangements may subsidize filter design costs, as well as offer complementary technology and market intelligence. However, we intend to retain ownership of our technology, designs and related improvements. Our goal is to establish and leverage alliances with new customers, who will help grow the market for our designs by integrating them with their own proprietary technology and products, thus combining their own particular strengths with ours to provide an extensive array of solutions.

We are using the net proceeds from our IPO for product development to commercialize our technology, research and development, the development of our patent strategy and expansion of our patent portfolio, as well as for working capital and other general corporate purposes. Our anticipated costs include employee salaries and benefits, compensation paid to consultants, capital costs for research and other equipment, costs associated with development activities including travel and administration, legal expenses, sales and marketing costs, general and administrative expenses, and other costs associated with a late-stage, publicly-traded technology company. However, this is highly dependent on the nature of our development efforts and our success in commercialization. We anticipate adding employees for research and development, as well as general and administrative functions, to support our efforts. We expect to incur consulting expenses related to technology development and other efforts as well as legal and related expenses to protect our intellectual property.

The amounts that we actually spend for any specific purpose may vary significantly and will depend on a number of factors including, but not limited to, our expected cash resources, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies. In addition, we may invest in complementary products, technologies or businesses.

We have earned no revenue since inception, and our operations have been funded with the initial capital contributions, proceeds from the sale of equity securities and debt. We have incurred accumulated losses totaling $30.9 million from inception through December 31, 2015. These losses are primarily the result of research and development costs associated with commercializing our technology, combined with start-up and operating costs including those related to financings and being a public company. We expect to continue to incur substantial costs for commercialization of our technology on a continuous basis because our business model involves developing and licensing custom filter designs.

Our principal sources of liquidity as of December 31, 2015 consist of existing cash balances and investments of $5.5 million. Currently, we are using approximately $2.3 million in cash per quarter in operating activities excluding fixed asset purchases and investments in patents. Due to these conditions, substantial doubt exists as to our ability to continue as a going concern. We believe our current resources will provide sufficient funding for planned operations through the second quarter of 2016. We have determined that additional capital from the sale of equity securities or the incurrence of indebtedness will be required for us to continue operations beyond the second quarter of 2016. We are in discussions with potential investors to provide us with equity funding. We also continue to have discussions with potential lenders, potential customers and/or strategic corporate partners that may provide funding to us through debt instruments or the licensing of future filter designs or development projects. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to potential customers or other investors, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to the continued listing requirements of NASDAQ. If we cannot raise needed funds, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a company.

Results of Operations

Comparison of the Years Ended December 31, 2014 and 2015

Research and Development. Research and development expenses consist of the direct engineering and other costs associated with the development and commercialization of our technology, including the development of filter designs for our customers. These consist primarily of the cost of employees and consultants, and to a lesser extent costs for equipment, software and supplies. We also include the costs for our intellectual property development program under research and development. This program focuses on patent strategy and invention extraction.

Research and development expenses increased from $2.5 million in the year ended December 31, 2014, or 2014, to $3.6 million in the year ended December 31, 2015, or 2015. The increase of $1.1 million is the result of the increased payroll, benefit costs, consulting costs and development costs related to increased activity on our various filter designs under development. We have expanded our research and development employees from 13 as of the end of 2014 to 17 employees as of December 31, 2015.

General and Administrative Expenses. General and administrative expenses include salaries, taxes and employee benefits for the executives and administrative staff. It also includes expenses for corporate overhead such as rent for our facilities, travel expenses, telecommunications, investor relations, insurance, professional fees and business consulting fees. We hired a chief financial officer and a controller in June 2014 and vice-president in September 2014. We hired two additional administrative employees in 2015.

General and administrative expenses increased from $2.3 million in 2014 to $4.1 million in 2015. The increase of $1.8 million consists primarily of increased payroll, directors' and officers' insurance, accounting and legal expenses and a severance charge related to a separation agreement with a terminated employee. We anticipate that our general and administrative expenses will likely continue to increase as a result of planned growth and the costs associated with operating as a public company. Additionally, we anticipate increased expenses related to legal, audit, regulatory and investor relations services associated with maintaining compliance with Securities and Exchange Commission and NASDAQ requirements, director and officer insurance premiums, and other costs associated with operating as a public company. We will continue to incur additional costs associated with the current securities litigation lawsuits filed against us.

Stock Compensation Expense. Stock compensation expenses consists of expenses related to equity awards issued to employees and non-employees and also to warrants and common stock issued in exchange for services. Stock compensation expense increased from $1.1 million in 2014 to $1.6 million in 2015. The increase of $524,000 was primarily a result of restricted stock units issued to employees as additional performance-based compensation.

Depreciation and Amortization Expense. Depreciation and amortization expense increased by $271,000 from $220,000 in 2014 to $491,000 in 2015 primarily as a result of our increases in fixed assets associated with our new corporate headquarters and new equipment and software associated with the increase in employees and our product development efforts.

Interest Income. Interest income decreased by $2,000 from $29,000 in 2014 to $27,000 in 2015 primarily due to the decreased cash and investment balances. We expect interest income to fluctuate in proportion to our cash balances.

Interest Expense. Interest expense decreased by $2.8 million, from $2.8 million in 2014 to none in 2015. The decrease is due to the conversion of senior and subordinated convertible notes into common stock in June 2014 in connection with our IPO. Debt discounts and deferred financing cost amortizations ceased upon conversion of these notes.

Fair Value Adjustments to Warrant and Derivative Liabilities. There was an increase of the fair value of the warrant and derivative liabilities during the year ended December 31, 2014 resulting in non-cash expense of $2 million for the year. The increase in the fair value of these liabilities in 2014 is primarily due to an increase in our share price and the related enterprise valuation. The IPO triggered (a) the conversion of all debt into equity and (b) the expiration of the redemption and put option features included in outstanding warrants to purchase shares of our common stock. These events eliminated all warrant and derivative liabilities as of the IPO Date. Consequently, we ceased recording any further quarterly adjustments after that date for the fair value of warrant or derivative liabilities or any associated gain or loss from such adjustments.

Other Income. Other income in 2014 consisted of a $1.2 million non-cash gain from the extinguishment of the derivative liability associated with our senior convertible notes. Due to the conversion of these notes, the derivative liability balance was accounted for as an extinguishment of debt with a portion recognized as a gain and classified in other income for the second quarter of 2014. There were no items in other income in 2015.

Income Taxes. We have no revenues and are currently operating at a loss. Consequently, our only tax liabilities for both periods were for minimum taxes in the States where we conduct business.

Liquidity and Capital Resources

Financing Activities

We have earned no revenue since inception. Our operations have been funded with capital contributions, debt and equity.

We began operations in July 2012 with initial capital contributions from our founders and STI. The founders contributed $200,000 and agreed to work full-time without pay until we secured adequate funding. STI contributed a patent portfolio, software, equipment, temporary office space and an early version of our first development agreement. The founders received Class B units in Resonant LLC, but later exchanged their Class B units for common stock of Resonant Inc. STI received Class C units in Resonant LLC, but later exchanged its Class C units for the $2.4 million Subordinated Convertible Note of Resonant Inc.

Our founders provided $200,000 of bridge loans during the first and second quarters of 2013.

We raised $6.3 million of net proceeds from the sale of Senior Convertible Notes in June 2013, and we used part of the proceeds to repay the bridge loans to our founders. In June 2014, we sold 3,105,000 shares of common stock in an IPO generating net proceeds of $16.2 million.

We had current assets of $5.6 million and current liabilities of $1.1 million at December 31, 2015, resulting in working capital of $4.5 million. This compares to working capital of $13.2 million at December 31, 2014. The change in working capital is primarily the result of the use of cash in our normal business operations.

Our principal sources of liquidity as of December 31, 2015 consist of existing cash balances and investments of $5.5 million. Currently, we are using approximately $2.3 million in cash per quarter in operating activities excluding fixed asset purchases and investments in patents. Due to these conditions, substantial doubt exists as to our ability to continue as a going concern. We believe our current resources will provide sufficient funding for planned operations through the second quarter of 2016. We have determined that additional capital from the sale of equity securities or the incurrence of indebtedness will be required for us to continue operations beyond the second quarter of 2016. We are in discussions with potential investors to provide us with equity funding. We also continue to have discussions with potential lenders, potential customers and/or strategic corporate partners that may provide funding to us through debt instruments or the licensing of future filter designs or development projects. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to potential customers or other investors, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to the continued listing requirements of NASDAQ. If we cannot raise needed funds, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a company.

Our consolidated financial statements have been prepared assuming that we will continue as a going concern. The factors described above raise substantial doubt about our ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from this uncertainty.

Cash Flow Analysis

Operating activities used cash of $4.6 million in 2014 and $7.4 million in 2015. The increase is primarily the result of increased expenses following our IPO in June 2014 and an increase in expenses associated with being a public company. These cash uses were partially offset by non-cash expenses including stock-based compensation and depreciation and amortization. Additionally, 2014 included significant offsets to the net loss from the fair value change in the warrant and derivative liabilities and the amortization of deferred finance costs.

Investing activities used cash of $9.1 million in 2014 and provided cash of $4.2 million in 2015. The use of cash in 2014 was primarily a result of the purchase of investments held to maturity and capital expenditures related to the completion of our office headquarters. The cash provided in 2015 was primarily a result of the net redemptions of investments held to maturity offset by the purchase of $100,000 related to the restricted cash commitment attributable to our corporate credit cards, capital expenditures and our investment in patents.

Financing activities provided cash of $16.2 million in 2014 and used cash of $45,000 in 2015. For the 2014 period, cash provided was a result of funding from our IPO offset by IPO costs. For the 2015 period, cash used in financing activities resulted from of the payment of withholding taxes related to the issuance of common stock as compensation to employees.

Off-Balance Sheet Transactions

We do not have any off-balance sheet arrangements.

Contractual Obligations and Known Future Cash Requirements

Indemnification Agreements

In the ordinary course of business, we may enter into agreements of varying scope and terms pursuant to which we agree to indemnify customers, vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of breach of such agreements, services to be provided by us or from intellectual property infringement claims made by third parties. In addition, we have entered into indemnification agreements with directors and certain officers and employees that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. We are currently indemnifying pursuant to these arrangements, certain of our officers and directors and the underwriter of our IPO against claims asserted in the putative securities class action lawsuit and related purported shareholder derivate action filed in the United States District Court for the Central District of California, discussed in Part I, Item 3, “Legal Proceedings,” of this Annual Report on Form 10-K. No other demands have been made upon us to provide indemnification under such agreements and there are no other claims that we are aware of that could have a material effect on our consolidated balance sheets, consolidated statements of operations, consolidated statements of stockholders’ equity or consolidated statements of cash flows.

Operating Leases

We lease various office facilities, including our corporate headquarters in Goleta, California and our office in Burlingame, California, under operating lease agreements that expire through July 2017. The terms of the lease agreements provide for rental payments on a graduated basis. We recognize rent expense on a straight-line basis over the lease periods.

Commitments

As of December 31, 2015, our principal commitments consisted of obligations under the operating leases for our offices. The following table summarizes our future minimum payments under these arrangements as of December 31, 2015:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**More Than 5 Years**
Operating lease commitments	$ 295,000	$ 205,000	$ 90,000	None	None

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies and estimates are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management or can be materially affected by changes from period to period in economic factors or conditions that are outside of our control. As a result, they are subject to an inherent degree of uncertainty. In applying these policies, our management uses their judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, our observance of trends in the industry, information provided by our customers and information available from other outside sources, as appropriate. While our significant accounting policies are described in the notes to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results.

Investments—Securities held-to-maturity: Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designation as of each statement of financial position date. Debt securities are classified as held-to-maturity when we have the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are stated at amortized cost, adjusted for amortization of premiums and accretion of discounts to maturity computed under the effective interest method. Such amortization is included in investment income. Interest on securities classified as held-to-maturity is included in investment income.

With respect to debt securities, when the fair value of a debt security classified as held-to-maturity or available for sale is less than its amortized cost, management assesses whether or not: (i) it has the intent to sell the security or (ii) it is more likely than not that the Company will be required to sell the security before its anticipated recovery. If either of these conditions is met, the Company must recognize as other-than-temporary impairment through earnings for the difference between the debt security’s amortized cost basis and its fair value, and such amount is included in net securities gains (losses).

For debt securities that do not meet the above criteria and the Company does not expect to recover a security’s amortized cost basis, the security is considered other-than-temporarily impaired. For these debt securities, the Company separates the total impairment into the credit loss component and the amount of the loss related to other factors. In order to determine the amount of the credit loss for a debt security, the Company calculates the recovery value by performing a discounted cash flow analysis based on the current cash flows and future cash flows management expects to recover. The discount rate is the effective interest rate implicit in the underlying debt security. The amount of the total other-than-temporary impairment related to credit loss is recognized in earnings and is included in net securities gains (losses). The amount of the total other-than-temporary impairment related to other factors is recognized in other comprehensive income. For debt securities that have recognized as other-than-temporary impairment through earnings, if through subsequent evaluation there is a significant increase in the cash flow expected, the difference between the amortized cost basis and the cash flows expected to be collected is accreted as interest income.

On July 8, 2014, we invested in a debt security that was classified as held-to-maturity as we had met the criteria for this debt investment classification. As of December 31, 2014, the amortized cost value was $8.0 million with an unrealized gain of $20,000 and a fair value of $8.0.million. The debt security matured on January 5, 2015 and was a foreign debt obligation. We recorded investment income of $20,000 for the year ended December 31, 2014 associated with this debt security.

During the year ended December 31, 2015, we invested in debt securities and federally insured certificates of deposit that we have classified as held-to-maturity as we currently meet the criteria for this investment classification. As of December 31, 2015, the amortized cost value is $3.0 million with an unrealized loss of $7,000 and a fair value of $3.0 million. The investments are federally insured certificates of deposit that mature in $250,000 increments at various dates in February

2016. We have not recognized an other-than-temporary impairment gain or loss or a comprehensive gain or loss to-date. We recorded investment income of $11,000 for the year ended December 31, 2015 associated with these investments.

Deferred Finance Costs—Costs relating to our senior convertible note and subordinated convertible note financings were capitalized and amortized over the term of the related debt using the effective interest method. Due to the conversion of these notes to common stock in connection with the IPO, the unamortized deferred finance costs of $358,000 were fully expensed as of the IPO Date. Amortization of deferred financing costs, including the write-off due to the conversion, were charged to interest expense and totaled $745,000 for the year ended December 31, 2014.

Research and Development—Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 730-10, *Research and Development*.

Derivative Instruments—We account for free-standing derivative instruments and hybrid instruments that contain embedded derivative features in accordance with ASC Topic 815, *Accounting for Derivative Instruments and Hedging Activities*, or ASC 815, as well as related interpretations of this topic. In accordance with this topic, derivative instruments and hybrid instruments are recognized as either assets or liabilities in the balance sheet and are measured at fair values with gains or losses recognized in earnings. Embedded derivatives that are not clearly and closely related to the host contract are bifurcated and are recognized at fair value with changes in fair value recognized as either a gain or loss in earnings. We determine the fair value of derivative instruments and hybrid instruments based on available market data using appropriate valuation models, giving consideration to all of the rights and obligations of each instrument.

We estimate fair values of derivative instruments and hybrid instruments using various techniques (and combinations thereof) that are considered to be consistent with the objective of measuring fair values. In selecting the appropriate technique, we consider, among other factors, the nature of the instrument, the market risks that it embodies and the expected means of settlement. For less complex instruments, such as free-standing warrants, we generally use the Black-Scholes option valuation model, adjusted for the effect of dilution, because it embodies all of the requisite assumptions (including trading volatility, estimated terms, dilution and risk free rates) necessary to fair value these instruments. Estimating fair values of derivative financial instruments requires the development of significant and subjective estimates that may, and are likely to, change over the duration of the instrument with related changes in internal and external market factors. Under ASC 815, increases in the trading price of our common stock and increases in fair value during a given financial quarter result in the application of non-cash derivative expense. Conversely, decreases in the trading price of our common stock and decreases in fair value during a given financial quarter would result in the application of non-cash derivative income. In situations where the Black-Scholes option valuation model is not deemed appropriate, we will use a Monte Carlo option-pricing model to determine the fair value of derivative instruments.

Stock-Based Compensation—We account for stock options in accordance with ASC Topic 718, *Compensation-Stock Compensation*. For stock options issued to employees and directors we use an option pricing model for estimating fair value at the date of grant. We account for restricted stock units issued to employees at fair value, based on the market price of our stock on the date of grant, net of estimated forfeitures. Compensation expense is recognized for the portion of the award that is ultimately expected to vest over the period during which the recipient renders the required services to the Company generally using the straight-line single option method. The fair value of non-employee restricted stock units awarded are remeasured as the awards vest, and the resulting increase in fair value, if any, is recognized as compensation expense in the period the related services are rendered.

Income Taxes—We account for income taxes in accordance with ASC Topic 740, *Income Taxes*, or ASC 740, which requires the recognition of deferred tax assets and liabilities for the future consequences of events that have been recognized in our condensed consolidated financial statements or tax returns. The measurement of the deferred items is based on enacted tax laws. In the event the future consequences of differences between financial reporting bases and the tax bases of our assets and liabilities result in a deferred tax asset, ASC 740 requires an evaluation of the probability of being able to realize the future benefits indicated by such asset. A valuation allowance related to a deferred tax asset is recorded when it is more likely than not that some portion or the entire deferred tax asset will not be realized. As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax expense in each of the jurisdictions in which we operate. We also assess temporary differences resulting from differing treatment of items for tax and accounting differences. We record a valuation allowance to reduce the deferred tax assets to the amount of future tax benefit that is more likely than not to be realized. For the period when we were organized as a limited liability company, we were treated as a partnership for federal and state income tax purposes under the entity classification domestic default rules. As of December 31, 2014 and 2015, no liability for unrecognized tax benefits was required to be reported. We recognize interest and penalties related to income tax matters in income taxes, and there were none for the years ended December 31, 2014 and December 31, 2015.

We have filed, or are in the process of filing, tax returns that are subject to audit by the respective tax authorities. Although the ultimate outcome would be unknown, we believe that any adjustments that may result from tax return audits are not likely to have a material, adverse effect on our consolidated results of operations, financial position or cash flows.

Effective November 2015, the FASB issued final guidance in Accounting Standards Update 2015-17, *Balance Sheet Classification of Deferred Taxes*, which requires companies to classify all deferred tax assets and liabilities as noncurrent on the balance sheet instead of separating deferred taxes into current and noncurrent amounts. The guidance is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all companies in any interim or annual period, and may be adopted on either a prospective or retrospective basis. We have adopted this standard for the interim and annual period ending December 31, 2015 on a prospective basis.

Earnings Per Share, or EPS—EPS is computed in accordance with ASC Topic 260, *Earnings per Share*, and is calculated using the weighted average number of common shares outstanding during each period. Diluted EPS assumes the conversion, exercise or issuance of all potential common stock equivalents unless the effect is to reduce a loss or increase the income per share. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options (using the treasury stock method), the exercise and/or conversion of our convertible notes and warrants (using the if-converted method).

Recently Issued and Adopted Accounting Pronouncements

Presentation of Financial Statements—Going Concern—This new guidance formally establishes management's responsibility to evaluate at each reporting period whether there is substantial doubt about the entity's ability to continue as a going concern for a period of one year after the date the financial statements are issued, and to provide related footnote disclosures. ASU No. 2014-15 is effective for annual reporting periods ending after December 15, 2016, and for interim and annual periods thereafter and early adoption is permitted. We have not early adopted and when adopted we do not expect it to have a material impact on our consolidated financial statements. We will continue to evaluate the effect on a going forward basis.

Simplifying the Presentation of Debt Issuance Costs—In April 2015, the FASB issued ASU No. 2015-03, which requires that debt issuance costs be presented not as an asset but as a reduction of the carrying amount of the related debt liability, similar to a debt discount. ASU No. 2015-03 is effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. We will adopt ASU No. 2015-03 on January 1, 2016, and such adoption is not expected to have a material impact on our consolidated financial statements as we do not have any outstanding debt.

Revenue from Contracts with Customers—In July 2015, the FASB voted to approve a one-year delay of the effective date of ASU No. 2014-09, which replaces the majority of all U.S. GAAP guidance that currently exists on revenue recognition with a single model to be applied to all contracts with customers. The core principle of ASU 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early application is not permitted. An entity must apply ASU 2014-09 using either the full retrospective approach, by restating all years presented, or the cumulative effect at the date of adoption approach. There is no impact that these changes will have on our consolidated financial statements as we have not recorded revenue yet.

Balance Sheet Classification of Deferred Taxes—In November 2015, FASB issued final guidance in ASU 2015-17, which requires companies to classify all deferred tax assets and liabilities as noncurrent on the balance sheet instead of separating deferred taxes into current and noncurrent amounts. The guidance is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all companies in any interim or annual period, and may be adopted on either a prospective or retrospective basis. We early adopted this standard for the interim and annual period ending December 31, 2015 on a prospective basis. As such, prior periods were not retrospectively adjusted. Due to the full valuation allowance on our deferred tax assets, the nature of the change on the balance sheet is not significant.

Leases—In February 2016, the FASB issued a comprehensive new leases standard that amends various aspects of existing accounting guidance for leases. It will require recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and the amended standard is the recognition of lease assets and lease liabilities by lessees on the balance sheet for those leases classified as operating leases under previous GAAP. The accounting applied by a lessor is largely unchanged from that applied under previous GAAP. As a result, we will have to recognize a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term on the balance sheet. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the effects of the new guidance on our consolidated financial statements and disclosures.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Resonant Inc.

We have audited the accompanying consolidated balance sheet of Resonant Inc. (the ‘‘Company’’), as of December 31, 2014, and the related consolidated statement of operations, stockholders’ equity (deficit) and cash flows of Resonant Inc. for the year ended December 31, 2014. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these consolidated financial statements 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. The Company was not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion. 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 audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Resonant Inc. as of December 31, 2014, and the results of operations and cash flows of Resonant Inc. for the year ended December 31, 2014, in conformity with accounting principles generally accepted in the United States of America.

/s/ Squar Milner LLP (formerly Squar, Milner, Peterson, Miranda & Williamson, LLP)

Los Angeles, California

March 25, 2015

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Resonant Inc.
Goleta, California

We have audited the accompanying consolidated balance sheet of Resonant Inc. as of December 31, 2015, and the related consolidated statements of operations, stockholders' equity, and cash flows for year ended December 31, 2015. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. 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 audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2015, and the results of its operations and its cash flows for the year ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has earned no revenue since inception through December 31, 2015 and has incurred significant losses from operations since inception. In addition, the Company's operations have been funded with initial capital contributions, proceeds from the sale of equity securities and debt. The Company's principal sources of liquidity as of December 31, 2015 consist of existing cash balances and investments of $5.5 million. These events and conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

/s/ Crowe Horwath LLP

Sherman Oaks, California

March 24, 2016

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RESONANT INC.

Consolidated Balance Sheets

	December 31, 2014	December 31, 2015
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 5,803,000	$ 2,501,000
Prepaid expenses and other current assets	105,000	138,000
Investment held-to-maturity	8,000,000	3,006,000
TOTAL CURRENT ASSETS	13,908,000	5,645,000
PROPERTY AND EQUIPMENT		
Fixed assets	1,249,000	1,664,000
Less: Accumulated depreciation and amortization	(208,000)	(672,000)
PROPERTY AND EQUIPMENT, NET	1,041,000	992,000
NONCURRENT ASSETS		
Patents and domain names, net	500,000	815,000
Restricted Cash	—	100,000
Other assets	15,000	15,000
TOTAL NONCURRENT ASSETS	515,000	930,000
TOTAL ASSETS	$ 15,464,000	$ 7,567,000
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 223,000	$ 518,000
Accrued expenses	146,000	60,000
Accrued salaries and payroll related expenses	315,000	467,000
Deferred rent, current portion	36,000	34,000
TOTAL CURRENT LIABILITIES	720,000	1,079,000
LONG-TERM LIABILITIES		
Deferred rent	54,000	20,000
TOTAL LIABILITIES	774,000	1,099,000
Commitments and contingencies (Note 9)		
STOCKHOLDERS' EQUITY		
Common stock, $0.001 par value, 47,000,000 authorized and 6,931,984 outstanding as of December 31, 2014, and 7,241,949 outstanding as of December 31, 2015	7,000	7,000
Preferred stock, $0.001 par value, 3,000,000 authorized and none outstanding as of December 31, 2014 and 2015	—	—
Additional paid-in capital	35,880,000	37,373,000
Accumulated deficit	(21,197,000)	(30,912,000)
TOTAL STOCKHOLDERS' EQUITY	14,690,000	6,468,000
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 15,464,000	$ 7,567,000

See Notes to Consolidated Financial Statements

RESONANT INC.

Consolidated Statements of Operations

	Year Ended December 31, 2014	Year Ended December 31, 2015
REVENUES	$ —	$ —
OPERATING EXPENSES		
Research and development expenses	2,534,000	3,554,000
General and administrative expenses	2,258,000	4,085,000
Stock compensation expense	1,087,000	1,611,000
Depreciation and amortization	220,000	491,000
TOTAL OPERATING EXPENSES	6,099,000	9,741,000
OPERATING LOSS	(6,099,000)	(9,741,000)
OTHER INCOME (EXPENSE)		
Interest and investment income	29,000	27,000
Interest expense	(2,808,000)	—
Fair value adjustments to warrant and derivative liabilities	(2,016,000)	—
Other income	1,164,000	—
TOTAL OTHER INCOME (EXPENSE)	(3,631,000)	27,000
LOSS BEFORE INCOME TAXES	(9,730,000)	(9,714,000)
Provision for income taxes	(1,000)	(1,000)
NET LOSS	$ (9,731,000)	$ (9,715,000)
NET LOSS PER SHARE - BASIC AND DILUTED	$ (2.16)	$ (1.36)
Weighted average shares outstanding — basic and diluted	**4,510,242**	**7,160,567**

See Notes to Consolidated Financial Statements

RESONANT INC.
Consolidated Statements of Stockholders' Equity

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount			
Balance, January 1, 2014	999,999	$ 1,000	$ 1,000	$ (11,466,000)	$ (11,464,000)
Sale of common stock in our initial public offering	3,105,000	3,000	18,627,000	—	18,630,000
Offering costs of our initial public offering	—	—	(2,388,000)	—	(2,388,000)
Reclassification of warrant liabilities	—	—	3,658,000	—	3,658,000
Conversion of convertible notes	2,787,667	3,000	9,397,000	—	9,400,000
Write-off of derivative liability upon conversion of notes payable	—	—	5,526,000	—	5,526,000
Vesting of restricted stock units	39,318	—	—	—	—
Sale of warrants	—	—	1,000	—	1,000
Stock-based compensation	—	—	1,087,000	—	1,087,000
Tax withholding on net exercise of stock-based awards	—	—	(29,000)	—	(29,000)
Net loss	—	—	—	(9,731,000)	(9,731,000)
Balance, December 31, 2014	6,931,984	7,000	35,880,000	(21,197,000)	14,690,000
Issuance of common stock for compensation	68,781	—	—	—	—
Stock issued to consultants for services	33,000	—	156,000	—	156,000
Stock-based compensation	—	—	1,382,000	—	1,382,000
Exercise of warrants, cashless	208,184	—	—	—	—
Tax withholding on net issuance of common stock for compensation	—	—	(45,000)	—	(45,000)
Net Loss	—	—	—	(9,715,000)	(9,715,000)
Balance, December 31, 2015	7,241,949	$ 7,000	$ 37,373,000	$ (30,912,000)	$ 6,468,000

See Notes to Consolidated Financial Statements

RESONANT INC.
Consolidated Statements of Cash Flows

	Year Ended December 31, 2014	Year Ended December 31, 2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net Loss	$ (9,731,000)	$ (9,715,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	220,000	491,000
Amortization of deferred finance costs	2,404,000	—
Stock-based compensation	1,087,000	1,611,000
Non-cash investment income	(20,000)	(18,000)
Gain on extinguishment of derivative liability	(1,164,000)	—
Fair value adjustments to warrant and derivative liabilities	2,016,000	—
Changes in assets and liabilities:		
Prepaids and other current assets	78,000	(32,000)
Other assets	(3,000)	—
Accounts payable	131,000	295,000
Accrued expenses	(18,000)	(86,000)
Accrued compensation	301,000	79,000
Deferred rent	86,000	(36,000)
Net cash used in operating activities	(4,613,000)	(7,411,000)
CASH FLOWS FROM INVESTING ACTIVITIES		
Capital expenditures	(1,017,000)	(415,000)
Expenditures for patents and domain names	(140,000)	(342,000)
Purchase of restricted cash investment	—	(100,000)
Redemption of investments held-to-maturity	—	15,000,000
Purchase of investments held-to-maturity	(7,980,000)	(9,989,000)
Net cash provided by (used in) investing activities	(9,137,000)	4,154,000
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from sale of common stock from the IPO	18,630,000	—
IPO costs	(2,388,000)	—
Proceeds from issuance of warrants	1,000	—
Payment of withholding tax on net exercise of stock-based awards	(29,000)	(45,000)
Net cash provided by (used in) financing activities	16,214,000	(45,000)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	2,464,000	(3,302,000)
CASH AND CASH EQUIVALENTS — Beginning of year	3,339,000	5,803,000
CASH AND CASH EQUIVALENTS — End of year	$ 5,803,000	$ 2,501,000
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
Interest	$ 414,000	$ —
Taxes	$ 1,000	$ 1,000
SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES		
Conversion of senior note	$ 7,000,000	$ —
Conversion of subordinated note	$ 2,400,000	$ —
Extinguishment of derivative liability	$ 5,526,000	$ —
Reclassification of warrant liabilities to additional paid-in capital	$ 3,658,000	$ —

See Notes to Consolidated Financial Statements

RESONANT INC.
Notes to Consolidated Financial Statements

NOTE 1—ORGANIZATION AND DESCRIPTION OF BUSINESS

Overview

Resonant Inc. is a late-stage development company located in Goleta, California. We were incorporated in Delaware in January 2012 as a wholly owned subsidiary of STI but had not conducted any operations through June 16, 2013. Resonant LLC was formed in California in May 2012. We commenced business on July 6, 2012 with initial contributions from our founders and STI. We changed our form of ownership from a limited liability company to a corporation in an exchange transaction in June 2013. We are the successor of Resonant LLC, a limited liability company formed on May 29, 2012 (our inception date). We commenced business on July 6, 2012 and completed our initial public offering, or IPO, on May 29, 2014, or IPO Date.

We are creating innovative filter designs for radio frequency, or RF, front-ends for the mobile device industry. The RF front-end is the circuitry in a mobile device responsible for analog signal processing and is located between the device's antenna and its digital baseband. We use a fundamentally new technology called Infinite Synthesized Networks®, or ISN®, to configure and connect resonators, the building blocks of RF filters. Filters are a critical component of the RF front-end used to select desired radio frequency signals and reject unwanted signals. We are using ISN to develop new classes of filter designs.

We plan to commercialize our technology by creating filter designs that address the problems created by the growing number of frequency bands in the RF front-end of mobile devices. We are developing a series of single-band surface acoustic wave, or SAW, filter designs for frequency bands presently dominated by larger and more expensive bulk acoustic wave, or BAW, filters. We are also developing multiplexer filter designs for 2 or more bands to address the carrier aggregation, or CA, requirements of our customers. Finally, we are developing reconfigurable filter designs to replace multiple filters for multiple bands. In order to succeed, we must convince RF front-end suppliers that our filter designs can significantly reduce the size and cost of their products.

We believe licensing our designs is the most direct and effective means of delivering our solutions to the market. Our target customers make part or all of the RF front-end. We intend to retain ownership of our designs, and we expect to be compensated through license fees and royalties based on sales of RF front-end modules that incorporate our designs. We do not intend to manufacture or sell any physical products or operate as a contract design company developing designs for a fee.

We continued to make progress during 2015 in the development of our technology in all areas of RF filter design. We have completed the development of a single-band filter design (a duplexer) that currently is being manufactured by a third-party fab, and we have several other single-band filter designs in various stages of development and commercialization. In the fourth quarter of 2015, we began to investigate the feasibility of using our technology to design multiplexers to address the complexities of carrier aggregation, and have commenced the initial design parameters for a couple of potential multiplexers. During 2015, we produced initial parts for a reconfigurable filter that reconfigures between two bands, which parts are currently being optimized, and commenced development of a filter reconfigurable between three bands.

Initial Public Offering

We closed an IPO of 3,105,000 shares of common stock (which includes the exercise in full by the underwriter of its over-allotment option) at a price of $6.00 per share on June 3, 2014. We received aggregate net proceeds, after deducting underwriting discounts and commissions and estimated offering expenses, of approximately $16.2 million. Our common stock commenced trading on the Nasdaq Capital Market under the symbol "RESN" on May 29, 2014, or IPO Date. The Securities and Exchange Commission declared effective a registration statement relating to these securities on May 28, 2014.

Capital Resources and Liquidity

We are using the net proceeds from our IPO for product development to commercialize our technology, research and development, the development of our patent strategy and expansion of our patent portfolio, as well as for working capital and other general corporate purposes. Our anticipated costs include employee salaries and benefits, compensation paid to consultants, capital costs for research and other equipment, costs associated with development activities including travel and administration, legal expenses, sales and marketing costs, general and administrative expenses, and other costs associated with a late-stage development, publicly-traded technology company. However, this is highly dependent on the nature of our development efforts and our success in commercialization. We anticipate adding employees for research and development, as well as general and administrative functions, to support our efforts. We expect to incur consulting expenses related to technology development and other efforts as well as legal and related expenses to protect our intellectual property.

The amounts that we actually spend for any specific purpose may vary significantly and will depend on a number of factors including, but not limited to, our expected cash resources, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies. In addition, we may invest in complementary products, technologies or businesses.

We have earned no revenue since inception, and our operations have been funded with initial capital contributions and proceeds from the sale of equity securities and debt. We have incurred accumulated losses totaling \$30.9 million from inception through December 31, 2015. The losses are primarily the result of research and development costs associated with commercializing our technology, combined with start-up, financing and public company costs. We expect to continue to incur substantial costs for commercialization of our technology on a continuous basis because our business model involves developing and licensing custom filter designs.

Our principal sources of liquidity as of December 31, 2015 consist of existing cash balances and investments of \$5.5 million. Currently, we are using approximately \$2.3 million in cash per quarter in operating activities excluding fixed asset purchases and investments in patents. Due to these conditions, substantial doubt exists as to our ability to continue as a going concern. We believe our current resources will provide sufficient funding for planned operations through the second quarter of 2016. We have determined that additional capital from the sale of equity securities or the incurrence of indebtedness will be required for us to continue operations beyond the second quarter of 2016. We are in discussions with potential investors to provide us with equity funding. We also continue to have discussions with potential lenders, potential customers and/or strategic corporate partners that may provide funding to us through debt instruments or the licensing of future filter designs or development projects. There can be no assurance that additional financing will be available to us on acceptable terms, or at all. Additionally, if we issue additional equity securities to raise funds, whether to potential customers or other investors, the ownership percentage of our existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Additionally, we may be limited as to the amount of funds we can raise pursuant to the continued listing requirements of NASDAQ. If we cannot raise needed funds, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our business plan and ultimately our viability as a company. These consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or amounts and classification of liabilities that might result from this uncertainty.

NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Use of Estimates—The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. In the opinion of management, all adjustments (consisting of normal accruals) considered for a fair presentation have been included. Significant estimates made in preparing these financial statements include (a) assumptions to calculate the fair values of financial instruments, derivative, warrants and equity instruments and other liabilities and the deferred tax asset valuation allowance and (b) the useful lives for depreciable and amortizable assets. Actual results could differ from those estimates. In the opinion of management, all adjustments, including normal recurring accruals considered necessary for a fair presentation, have been included.

Reclassifications—Certain amounts in the consolidated statement of operations for the year ended December 31, 2014 have been reclassified to conform to the current year presentation.

Investments—Securities held-to-maturity: Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designation as of each statement of financial position date. Debt securities are classified as held-to-maturity when we have the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are stated at amortized cost, adjusted for amortization of premiums and accretion of discounts to maturity computed under the effective interest method. Such amortization is included in investment income. Interest on securities classified as held-to-maturity is included in investment income.

With respect to debt securities, when the fair value of a debt security classified as held-to-maturity or available for sale is less than its amortized cost, management assesses whether or not: (i) we have the intent to sell the security or (ii) it is more likely than not that we will be required to sell the security before its anticipated recovery. If either of these conditions is met, we must recognize as other-than-temporary impairment through earnings for the difference between the debt security's amortized cost basis and its fair value, and such amount is included in net securities gains (losses).

For debt securities that do not meet the above criteria and are not expected to be recovered at the amortized cost basis, the security is considered other-than-temporarily impaired. For these debt securities, we separate the total impairment into the credit loss component and the amount of the loss related to other factors. In order to determine the amount of the credit loss for a debt security, we calculate the recovery value by performing a discounted cash flow analysis based on the current cash flows and future cash flows management expects to recover. The discount rate is the effective interest rate implicit in the underlying debt security. The amount of the total other-than-temporary impairment related to credit loss is recognized in earnings and is included in net securities gains (losses). The amount of the total other-than-temporary impairment related to other factors is recognized in other comprehensive income. For debt securities that have recognized as other-than-temporary impairment through earnings, if through subsequent evaluation there is a significant increase in the cash flow expected, the difference between the amortized cost basis and the cash flows expected to be collected is accreted as interest income.

On July 8, 2014, we invested in a debt security that we classified as held-to-maturity. As of December 31, 2014, the amortized cost value was $8.0 million with an unrealized gain of $20,000 and a fair value of $8.0.million. The debt security matured on January 5, 2015 and was a foreign debt obligation. We recorded investment income of $20,000 for the year ended December 31, 2014 associated with this debt security.

During the year ended December 31, 2015, we invested in debt securities and federally insured certificates of deposit that we have classified as held-to-maturity as we currently meet the criteria for this investment classification. As of December 31, 2015, the amortized cost value is $3.0 million with an unrealized loss of $7,000 and a fair value of $3.0 million. The investments are federally insured certificates of deposit that mature in $250,000 increments at various dates in February 2016. We have not recognized an other-than-temporary impairment gain or loss or a comprehensive gain or loss to-date. We recorded investment income of $11,000 for the year ended December 31, 2015 associated with these investments.

Restricted Cash— Restricted cash consists of a certificate of deposit held at a bank and pledged as collateral against our corporate credit card account.

Fair Value of Financial Instruments—We measure certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The carrying amounts of our financial instruments, including cash equivalents, restricted cash, investments held-to-maturity, accounts payable, and accrued liabilities, approximate fair value due to their short maturities.

The carrying amount of our warrant liabilities and our derivative liability related to the Senior Convertible Notes were marked to market each reporting date until the warrants and derivative liability were settled. Prior to the IPO Date, the fair value of the financing warrant liability and derivative liability (*see Note 5 and Note 6*) were estimated using a Monte Carlo option-pricing model, which takes into consideration the market values of comparable public companies, considering among other factors, the use of multiples of earnings, and adjusted to reflect the restrictions on the ability of our securities to trade in an active market. As of the IPO Date, the fair value of the remaining warrants and the financing warrant liability and derivative liability, were estimated using a Black-Scholes option valuation technique as it embodies all of the requisite assumptions (including trading volatility, remaining term to maturity, market price, strike price, and risk free rates) necessary to fair value these instruments. Estimates of expected term were based on the estimated time to expiration. The risk-free interest rate was based on the U.S. Treasury yield for a term consistent with the estimated expected term. We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we use an expected dividend yield of zero. Our expected volatility was derived from the historical volatilities of several public companies in similar industries because we have limited information on the volatility of the price of our common stock because we have no trading history. When making the selections of our industry peer companies to be used in the volatility calculation, we consider operational area, size, business model, industry and the business of potential comparable companies. These historical volatilities are weighted based on certain qualitative factors and combined to produce a single volatility factor. All of the warrant liabilities and the derivative liability are valued using level 3 inputs (*see Note 10 for the range of assumptions used*).

Prior to the IPO Date, the determination of the value of our common stock, and for purposes of establishing the value of the warrants and derivatives related to the bridge financing, the senior convertible notes, the subordinated convertible notes and the consulting warrants, management considered several factors and the probability of achieving each one of them. The significant factors were (1) securing adequate funding to complete the single-band commercial surface acoustic wave, or SAW, duplexer design under the terms of the development agreement with our first customer; (2) developing a working duplexer product that meets the specifications of our first customer; and (3) our first customer exercising its licensing option if the duplexer product met its specifications. These probabilities were affected by our ability to hire technical personnel to develop the technology and design the product, establish a management team to develop a business plan, secure financing, execute the business plan, and interact with our first customer to achieve the milestones contained in the development agreement with them. The increases resulted in higher valuations of our common stock and accordingly the values of the warrants and derivatives at each of these periods. Following the IPO Date, we used the current market value of our common stock to assist in determining the value of the warrants and stock options using the Black-Scholes option valuation model.

Operating Leases—We lease office space and research facilities under operating leases. Certain lease agreements contain free or escalating rent payment provisions. We recognize rent expense under such leases on a straight-line basis over the term of the lease. Lease renewal periods are considered on a lease-by-lease basis in determining the lease term.

Cash and Cash Equivalents—We consider all liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

Concentration of Credit Risk—We maintain checking accounts at one financial institution. These accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to $250,000 per account. Management believes we are not exposed to significant credit risk due to the financial position of the depository institution in which these deposits are held.

Property and Equipment—Property and equipment consists of leasehold improvements associated with our new corporate office, software purchased during the normal course of business, computer equipment and office furniture and fixtures, all of which are recorded at cost. Depreciation and amortization is recorded using the straight-line method over the respective useful lives of the assets ranging from three to five years. Long-lived assets, including software are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

Intangible Assets Subject to Amortization—At December 31, 2014 and December 31, 2015, intangible assets subject to amortization include patents and a domain name purchased for use in operations. Intangible assets are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

Deferred Finance Costs—Costs relating to our senior convertible note and subordinated convertible note financings were capitalized and amortized over the term of the related debt using the effective interest method. Due to the conversion of these notes to common stock in connection with the IPO, the unamortized deferred finance costs of $358,000 were fully expensed as of the IPO Date in 2014. Amortization of deferred financing costs, including the write-off due to the conversion, was charged to interest expense and totaled $745,000 for the year ended December 31, 2014.

Research and Development—Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 730-10, *Research and Development*.

Stock-Based Compensation—We account for employee stock options in accordance with ASC Topic 718, *Compensation-Stock Compensation*. For stock options issued to employees and directors we use the Black-Scholes option valuation model for estimating fair value at the date of grant. For stock options issued for services rendered by non-employees, we recognize compensation expense in accordance with the requirements of ASC 505-50*, Equity*, or ASC 505-50, as amended. Non-employee option grants that do not vest immediately upon grant are recorded as an expense over the vesting period. At the end of each financial reporting period prior to performance, the value of these options, as calculated using the Black-Scholes option valuation model, is determined, and compensation expense recognized or recovered during the period is adjusted accordingly. Since the fair market value of options granted to non-employees is subject to change in the future, the amount of the future compensation expense is subject to adjustment until the common stock options or warrants are fully vested.

We account for restricted stock units issued to employees at fair value, based on the market price of our stock on the date of grant, net of estimated forfeitures. Compensation expense is recognized for the portion of the award that is ultimately expected to vest over the period during which the recipient renders the required services to the Company generally using the straight-line single option method. The fair value of non-employee restricted stock units awarded are remeasured as the awards vest, and the resulting increase or decrease in fair value, if any, is recognized as an increase or decrease to compensation expense in the period the related services are rendered.

Earnings Per Share, or EPS—EPS is computed in accordance with ASC Topic 260, *Earnings per Share*, and is calculated using the weighted average number of common shares outstanding during each period. Diluted EPS assumes the conversion, exercise or issuance of all potential common stock equivalents unless the effect is to reduce a loss or increase the income per share. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options (using the treasury stock method), the exercise and/or conversion of our convertible notes and warrants (using the if-converted method).

The shares used to compute net loss per share represent the weighted-average common shares outstanding for the years ended December 31, 2014 and December 31, 2015.

The following table presents the number of anti-dilutive shares excluded from the calculation of diluted net loss per share attributable to common stockholders for the periods below:

	Year Ended December 31, 2014	Year Ended December 31, 2015
Common stock warrants	1,039,484	804,463
Common stock options	491,200	565,050
Total shares excluded from net loss per share attributable to common stockholders	1,530,684	1,369,513

Derivative Instruments—We account for free-standing derivative instruments and hybrid instruments that contain embedded derivative features in accordance with ASC Topic 815, *Accounting for Derivative Instruments and Hedging Activities*, or ASC 815, as well as related interpretations of this topic. In accordance with this topic, derivative instruments and hybrid instruments are recognized as either assets or liabilities in the balance sheet and are measured at fair values with gains or losses recognized in earnings. Embedded derivatives that are not clearly and closely related to the host contract are bifurcated and are recognized at fair value with changes in fair value recognized as either a gain or loss in earnings. We determine the fair value of derivative instruments and hybrid instruments based on available market data using appropriate valuation models, giving consideration to all of the rights and obligations of each instrument.

We estimate fair values of derivative instruments and hybrid instruments using various techniques (and combinations thereof) that are considered to be consistent with the objective of measuring fair values. In selecting the appropriate technique, we consider, among other factors, the nature of the instrument, the market risks that it embodies and the expected means of settlement. For less complex instruments, such as free-standing warrants, we generally use the Black-Scholes option valuation model, adjusted for the effect of dilution, because it embodies all of the requisite assumptions (including trading volatility, estimated terms, dilution and risk free rates) necessary to fair value these instruments. Estimating fair values of derivative financial instruments requires the development of significant and subjective estimates that may, and are likely to, change over the duration of the instrument with related changes in internal and external market factors. Under ASC 815, increases in the trading price of our common stock and increases in fair value during a given financial quarter result in the application of non-cash derivative expense. Conversely, decreases in the trading price of our common stock and decreases in fair value during a given financial quarter would result in the application of non-cash derivative income. In situations where the Black-Scholes option valuation model is not deemed appropriate, we will use a Monte Carlo option-pricing model to determine the fair value of derivative instruments.

Income Taxes—We account for income taxes in accordance with ASC Topic 740, *Income Taxes*, or ASC 740, which requires the recognition of deferred tax assets and liabilities for the future consequences of events that have been recognized in our condensed consolidated financial statements or tax returns. The measurement of the deferred items is based on enacted tax laws. In the event the future consequences of differences between financial reporting bases and the tax bases of our assets and liabilities result in a deferred tax asset, ASC 740 requires an evaluation of the probability of being able to realize the future benefits indicated by such asset. A valuation allowance related to a deferred tax asset is recorded when it is more likely than not that some portion or the entire deferred tax asset will not be realized. As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax expense in each of the jurisdictions in which we operate. We also assess temporary differences resulting from differing treatment of items for tax and accounting differences. We record a valuation allowance to reduce the deferred tax assets to the amount of future tax benefit that is more likely than not to be realized. As of December 31, 2014 and December 31, 2015, no liability for unrecognized tax benefits was required to be reported. We recognize interest and penalties related to income tax matters in income taxes, and there were none for the years ended December 31, 2014 and December 31, 2015, respectively.

We have filed, or are in the process of filing, tax returns that are subject to audit by the respective tax authorities. Although the ultimate outcome would be unknown, we believe that any adjustments that may result from tax return audits are not likely to have a material, adverse effect on our consolidated results of operations, financial position or cash flows.

Recent Accounting Pronouncements

Presentation of Financial Statements—Going Concern—This new guidance formally establishes management's responsibility to evaluate at each reporting period whether there is substantial doubt about the entity's ability to continue as a going concern for a period of one year after the date the financial statements are issued, and to provide related footnote disclosures. ASU No. 2014-15 is effective for annual reporting periods ending after December 15, 2016, and for interim and annual periods thereafter and early adoption is permitted. We have not early adopted and when adopted we do not expect it to have a material impact on our consolidated financial statements. We will continue to evaluate the effect on a going forward basis.

Debt Issuance Costs—In April 2015, the FASB issued ASU No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs,* which requires that debt issuance costs be presented not as an asset but as a reduction of the carrying amount of the related debt liability, similar to a debt discount. ASU No. 2015-03 is effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. We will adopt ASU No. 2015-03 on January 1, 2016, and such adoption is not expected to have a material impact on its consolidated financial statements as we do not have any outstanding debt.

Revenue—In July 2015, the FASB voted to approve a one-year delay of the effective date of ASU No. 2014-09, *Revenue from Contracts with Customers,* which replaces the majority of all U.S. GAAP guidance that currently exists on revenue recognition with a single model to be applied to all contracts with customers. The core principle of ASU 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early application is not permitted. An entity must apply ASU 2014-09 using either the full retrospective approach, by restating all years presented, or the cumulative effect at the date of adoption approach. There is no impact that these changes will have on our consolidated financial statements as we have not recorded revenue yet.

Deferred Taxes—In November 2015, FASB issued final guidance in ASU 2015-17, *Balance Sheet Classification of Deferred Taxes,* which requires companies to classify all deferred tax assets and liabilities as noncurrent on the balance sheet instead of separating deferred taxes into current and noncurrent amounts. The guidance is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all companies in any interim or annual period, and may be adopted on either a prospective or retrospective basis. We early adopted this standard for the interim and annual period ending December 31, 2015 on a prospective basis. As such, prior periods were not retrospectively adjusted. Due to the full valuation allowance on our deferred tax assets, the nature of the change on the balance sheet is not significant.

Leases—In February 2016, the FASB issued a comprehensive new leases standard that amends various aspects of existing accounting guidance for leases. It will require recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and the amended standard is the recognition of lease assets and lease liabilities by lessees on the balance sheet for those leases classified as operating leases under previous GAAP. The accounting applied by a lessor is largely unchanged from that applied under previous GAAP. As a result, we will have to recognize a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term on the balance sheet. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the effects of the new guidance on our consolidated financial statements and disclosures.

NOTE 3—PATENTS AND DOMAIN NAME

We acquired patents from STI as a result of an asset contribution, and recorded them at their carryover basis. In June 2013, when STI exchanged its membership interest in Resonant LLC for a subordinated convertible note, the only assets of Resonant LLC other than cash were patents. The fair value of the patents remained substantially the same as their carrying value at the exchange date. In addition, we acquired other patents and the domain name www.resonant.com through the normal course of business. Issued patents are amortized over their approximate useful life of 17 years, or 20 years in the case of new patents, once they are approved by their respective regulatory agency. For the patents acquired from STI, we are amortizing them over the remaining useful life of 1 to 13 years as of December 31, 2015. The domain name is amortized over the approximate useful life of 10 years. See the table below for a summary of patents (issued and pending) and domain name costs capitalized and amortized at December 31, 2015:

	Total
Balance at December 31, 2013	$ 380,000
Amortization	(20,000)
Legal fees for pending patents	140,000
Balance at December 31, 2014	500,000
Amortization	(27,000)
Legal fees for pending patents	342,000
Balance at December 31, 2015	$ 815,000

Amortization expense for the patents issued and the domain name for each of the five fiscal years through December 31, 2020 and thereafter is estimated as follows:

Years ending December 31,		
2016	$	29,000
2017		29,000
2018		29,000
2019		29,000
2020		29,000
2021 and thereafter		207,000
Total amortization expense	$	352,000

NOTE 4—PROPERTY AND EQUIPMENT, NET

Property and equipment, net consists of the following:

		2014		2015
Cost:				
Computers, peripheral and scientific equipment	$	145,000	$	360,000
Software		464,000		644,000
Leasehold Improvements		283,000		476,000
Office furniture and equipment		175,000		184,000
Construction-in-process		182,000		—
		1,249,000		1,664,000
Less accumulated depreciation and amortization		(208,000)		(672,000)
Property and equipment, net	$	1,041,000	$	992,000

Depreciation expense for the years ended December 31, 2014 and December 31, 2015 was $200,000 and $464,000, respectively. No property was disposed of in 2014 or 2015.

NOTE 5—BRIDGE LOANS, MEMBER LOAN AND CONVERTIBLE DEBT

Senior Convertible Note

We entered into a securities purchase agreement on June 17, 2013 for the sale to multiple investors of $7.0 million in principal amount of senior secured convertible promissory notes, which we refer to as Senior Convertible Notes. MDB served as placement agent in this financing. We closed the sale on the same day and issued $7.0 million in principal amount of Senior Convertible Notes. We also paid $700,000 to MDB as a placement agent fee. The net cash proceeds were $6.3 million. We also issued to MDB a warrant to purchase shares of our common stock as consideration for its financing services, and another warrant to purchase shares of our common stock as consideration for business consulting services. The Senior Convertible Notes bore interest at a 6% per annum and were scheduled to mature on September 17, 2014 unless earlier converted.

The conversion feature included in the terms of the Senior Convertible Notes was determined to be a derivative liability that we bifurcated for accounting purposes. We measured the derivative liability at fair value at the issue date of Senior Convertible Notes based on a Monte Carlo option-pricing model and determined the value to be $1.9 million. The derivative liability was recorded with a corresponding debit to debt discount that was amortized as interest expense using the effective interest method over the life of the instrument. At the time of issuance, the Senior Convertible Notes and derivative liability were recorded on the balance sheet as a long-term note because the notes mature on September 17, 2014 (greater than one year). Upon a Qualified IPO, or other event that results in the conversion of the notes into common stock, a portion of the carrying value of the derivative liability would be accounted for as an extinguishment of debt and any remaining unamortized debt discount would be expensed at such date. At December 31, 2013, the Monte Carlo option-pricing model used the following assumptions to estimate fair value: equity value of $20.0 million, different conversion prices for different scenarios, time to maturity of 9-15 months under the scenarios based on the expected date of a Qualified IPO, volatility of 102.1% and risk free rate of 0.19%. As noted above, in connection with the Senior Convertible Notes and as a result of the warrants issued to MDB as consideration for its placement agent services, we determined that an additional discount to the debt should be recorded in the amount of $300,000, and we were amortizing this amount using the effective interest method over the life of the instrument. The Senior Convertible Notes did not include any financial covenants.

Upon the completion of the IPO, which was considered a Qualified IPO under the Senior Convertible Note agreement, the Senior Convertible Notes were converted into 2,087,667 shares of common stock as of the date of the IPO and unpaid interest of $404,000 was paid from the proceeds of the IPO. Additionally, the unamortized debt discount of $780,000 was fully amortized to interest expense for the year ended December 31, 2014. Interest expense, excluding the unamortized debt discount write-off, was $728,000 for year ended December 31, 2014.

Subordinated Convertible Note

On June 17, 2013, we issued to STI a subordinated senior secured convertible note in the principal amount $2.4 million, which we refer to as the Subordinated Convertible Note, as consideration for our acquisition from STI of its 300,000 Class C units of Resonant LLC and 100 shares of our common stock. The Subordinate Convertible Note did not bear interest and was scheduled to mature on September 17, 2014 unless earlier converted.

The Subordinated Convertible Note was non-interest bearing. We considered the effective interest rate of the Subordinated Convertible Note to be at least 11.8% per annum as the Subordinated Convertible Note was subordinated to the Senior Convertible Notes and had greater inherent risk, and, therefore, it should carry a higher interest rate than that of the Senior Convertible Notes. We calculated a discount to the face value of the Subordinated Convertible Note of $300,000, which we recorded as debt discount and were amortizing as interest expense over the life of the Subordinated Convertible Note using the effective interest rate method. The Subordinated Convertible Note did not include any financial covenants.

Upon the completion of the IPO, which was considered a Qualified IPO under the Subordinated Convertible Note agreement, the Subordinated Convertible Note was converted into 700,000 shares of common stock as of the date of the IPO and there was no unpaid interest. Additionally, the unamortized debt discount of $61,000 was fully amortized to interest expense for the year ended December 31, 2014. Interest expense, excluding the unamortized debt discount write-off, was $90,000 for the year ended December 31, 2014.

NOTE 6—WARRANT LIABILITIES

From time to time, we and Resonant LLC have issued warrants to purchase shares of common stock and units of membership interest, respectively. These warrants have been issued in connection with the financing transactions and consulting services. Our warrants are subject to standard anti-dilution provisions applicable to shares of our common stock.

Bridge Warrants

In connection with and as an inducement to make the bridge loans in January and March 2013, Resonant LLC issued to each of our three founders five-year warrants to purchase Class B units of Resonant LLC at an exercise price of $0.40 per unit, which we refer to as the Bridge Warrants. The Bridge Warrants were issued in two tranches, at the same time the bridge loan was funded, with each founder receiving warrants for 20,833 Class B units on each of January 31, 2013 (for a total of 62,499 Class B units) and March 19, 2013 (for a total of 62,499 Class B units). The founders paid an aggregate of $1,000 in cash for the Bridge Warrants.

We estimated the initial fair value of the Bridge Warrants issued in January 2013 to be $200,000 using the Black-Scholes option valuation model and the following assumptions: exercise price of $0.40 per unit; implied unit price of $3.75; expected volatility of 60%; expected dividend rate of 0%; risk free interest rate of 0.88%; and expiration date of 5 years. We estimated the initial fair value of the Bridge Warrants issued in March 2013 to be $200,000 using the Black-Scholes option valuation model and the following assumptions: exercise price of $0.40 per unit; implied unit price of $3.60; expected volatility of 60%; expected dividend rate of 0%; risk free interest rate of 0.80%; and expiration date of 5 years. (*See Note 2).*

On June 17, 2013, in connection with our acquisition of all of the outstanding membership interests of Resonant LLC in an exchange transaction, the founders exchanged their Bridge Warrants to purchase an aggregate of 124,998 Class B units of Resonant LLC for Bridge Warrants to purchase an aggregate of 249,999 shares of our common stock at an exercise price of $0.20 per share. All other terms of the Bridge Warrants remained the same. We revalued the Bridge Warrants on June 17, 2013 to $400,000 using the Black-Scholes option valuation model with the following assumptions: exercise price of $0.20 per share; implied stock price of $3.23; expected volatility of 60%; expected dividend rate of 0%; risk free interest rate of 1.06%; and expiration date of 5 years. At each reporting period up through the IPO Date, any changes to the fair value of the Bridge Warrants were recorded in the consolidated statements of operations. (*See Note 10).*

Consulting Warrant, Financing Warrant and Underwriting Warrant

Upon consummation of our Senior Convertible Note financing, (*see Note 5*), for business consulting services provided by MDB, we issued to MDB a seven-year warrant to purchase 222,222 shares of our common stock at an exercise price of $0.01 per share, which we refer to as the Consulting Warrant. The Consulting Warrant is exercisable six months after the completion of our initial public offering and prior to June 15, 2020. We estimated the initial fair value of the Consulting Warrant to be $700,000 using the Black-Scholes option valuation model with the following assumptions: exercise price of $0.01 per share; implied stock price of $3.23; expected volatility of 68.8%; expected dividend rate of 0%; risk free interest rate of 1.57%; and expiration date of 7 years. (*See Note 2).*

In addition, for placement agent services provided by MDB in connection with our Senior Convertible Note financing, we issued to MDB a seven-year warrant to purchase shares of our common stock, which we refer to as the Financing Warrant. The Financing Warrant is exercisable six months after the completion of our IPO and prior to June 15, 2020. The Financing Warrant is exercisable for a number of shares of our common stock equal to $700,000 divided by the Financing Warrant's exercise price. Prior to consummation of our Qualified IPO, the exercise price is equal to $6,000,000 divided by the Fully Diluted Shares. Upon consummation of our Qualified IPO, the exercise price is adjusted to be equal to the conversion price of our Senior Convertible Notes. As the value of the Financing Warrant depended on future price movements of our equity, we estimated the fair value of the Financing Warrant at December 31, 2013 to be $700,000 using a Monte Carlo option-pricing model with the following assumptions: equity value of $20 million, different conversion prices for different scenarios, time to maturity of 6.5 years, volatility of 65.3% and risk free rate of 2.28%. (*See Note 2).*

In connection with the closing of our IPO, we also issued a third warrant to MDB related to their role as the sole underwriter for our IPO, we refer to this as the Underwriting Warrant. We issued them a 5-year warrant to purchase 310,500 shares of common stock at an exercise price of $7.50 per share. The warrant was not exercisable until November 24, 2014 (180-days from the date of the underwriting agreement) and expires May 28, 2019. We estimated the fair value of the Underwriting Warrant at issuance date to be $901,000 using the Black-Scholes option valuation model with the following assumptions: market price of the stock of $6.00 per share, time to maturity of 5 years, volatility of 63.1%, zero expected dividend rate and risk free rate of 1.5%. (*See Note 2).*

Investor Relations Warrants

In August 2014 and October 2014, we entered into agreements with our investor relations firm, or IR Firm, and an IR consultant to provide us with investor relations services. Pursuant to the IR Firm agreement, in addition to monthly cash compensation of $8,500 per month, we issued to the IR Firm a 3-year consulting warrant, or IR Consulting Warrant, for the purchase of 42,000 shares of common stock that became fully vested on July 21, 2015. The IR Consulting Warrant has an exercise price of $8.31 and expires on July 17, 2017. We estimated the fair value of the IR Consulting Warrant at issuance date to be $119,000 using the Black-Scholes option valuation model with the following assumptions: market price of the stock of $6.91 per share, time to maturity of 3 years, volatility of 69.7%, zero expected dividend rate and risk free rate of 0.88%. In

September, 2015 we amended the agreement with the IR Firm and adjusted the monthly cash compensation to $3,000 per month. Pursuant to our agreement with the IR consultant, in addition to monthly cash compensation of $5,000 per month, we issued to the IR consultant a 4-year consulting warrant, or IR Warrant, for the purchase of 6,000 shares of common stock that vests monthly over twelve months. The IR Warrant has an exercise price of $6.50 and expires on September 30, 2018. Since the IR Warrant vests monthly, we estimated the fair value of the IR Warrant at the date of each vesting period over the twelve month period using the Black-Scholes option valuation model with the following assumptions: market prices of the stock of $2.98-$11.62 per share, time to maturity of 3.3 to 4 years, volatility of ranges of 60% to 81.8%, zero expected dividend rate and risk free rate range of 0.91% to 1.5%. We recorded an increase of $58,000 and a reduction of $26,000 for stock-based compensation related to the IR warrants during the years ended December 31, 2014 and December 31, 2015, respectively, which was included in general and administration expense.

A roll-forward of warrant activity from January 1, 2014 to December 31, 2014 is shown in the following table:

	Issued and Outstanding Warrants as of January 1, 2014	Warrants Issued	Warrants Exercised/ Expired	Issued and Outstanding Warrants as of December 31, 2014
Bridge Warrants	249,999	—	—	249,999
Consulting Warrant	222,222	—	—	222,222
Financing Warrant (1)	208,763	—	—	208,763
Underwriting Warrant	—	310,500	—	310,500
IR consulting warrants	—	48,000	—	48,000
	680,984	358,500	—	1,039,484

(1) The number of shares of common stock underlying the Financing Warrant was determined using an exercise price of $3.35 per share, assuming the IPO price of our common stock in a Qualified IPO would be at least$5.59 per share. Upon completion of the IPO with a price of $6.00 per share, the number of shares was considered unchanged and final.

A roll-forward of warrant activity from January 1, 2015 to December 31, 2015 is shown in the following table:

	Issued and Outstanding Warrants as of January 1, 2015	Warrants Issued	Warrants Exercised/ Expired	Issued and Outstanding Warrants as of December 31, 2015
Bridge Warrants	249,999	—	—	249,999
Consulting Warrant	222,222	—	(104,444) (2)	117,778
Financing Warrant (1)	208,763	—	(130,577) (2)	78,186
Underwriting Warrant	310,500	—	—	310,500
IR consulting warrants	48,000	—	—	48,000
	1,039,484	—	(235,021)	804,463

(2) During the year ended December 31, 2015, there were 235,021 common stock warrants that were exercised through a cashless exercise which netted 208,184 shares being issued.

During the year ended December 31, 2014, we recorded a loss of $382,000, for the change in fair value of the warrants.

For periods prior to the IPO Date, we used the Monte-Carlo option pricing model which takes into consideration the historical volatilities of comparable public companies using data from Capital IQ and implied volatiles from Bloomberg considering the differences in size among the public companies and us, and the warrant's time to expiration. Estimates of expected term were based on the estimated time to expiration. The risk-free interest rate was based on the U.S. Treasury yield for a term consistent with the estimated expected term. The Monte-Carlo model used daily steps, assuming 252 trading days per year, which was based on 52 weeks of 5 trading days less 8 holidays, a standard assumption in the industry.

NOTE 7—STOCKHOLDERS' EQUITY

Common Stock

Pursuant to our amended and restated certificate of incorporation, we are authorized to issue 47,000,000 shares of common stock. Holders of our common stock are entitled to dividends as and when declared by the Board of Directors, subject to rights and holders of all classes of stock outstanding having priority rights to dividends. There have been no dividends declared to date. Each share of common stock is entitled to one vote.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation, we are authorized to issue 3,000,000 shares of preferred stock. The Board of Directors has the authority, without action by our stockholders, to designate and issue shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. To-date, no preferred shares have been issued.

NOTE 8— STOCK-BASED COMPENSATION

2014 Omnibus Incentive Plan

In January 2014, our board of directors approved the 2014 Omnibus Incentive Plan and amended and restated the plan in March 2014. Our stockholders approved the Amended and Restated 2014 Omnibus Incentive Plan, or the 2014 Plan, in March 2014. Our 2014 Plan permits for the issuance of equity based instruments covering up to an initial total of 1,400,000 shares of common stock.

Option Valuation

We have computed the fair value of options granted to employees and non-employees using the Black-Scholes option valuation model. The compensation costs of non-employee arrangements are subject to re-measurement at each reporting period over the vesting terms as earned. Option forfeitures are estimated at the time of valuation and reduce expense ratably over the vesting period. This estimate will be adjusted periodically based on the extent to which actual option forfeitures differ, or are expected to differ, from the previous estimate, when it is material. The expected term used for options issued to non-employees is the contractual life and the expected term used for options issued to employees is the estimated period of time that options granted are expected to be outstanding. We have estimated the expected life of our employee stock options using the "simplified" method, whereby, the expected life equals the arithmetic average of the vesting term and the original contractual term of the option due to our lack of sufficient historical data. Since our stock has not been publicly traded for a sufficiently long period of time, we are utilizing an expected volatility figure based on a review of the historical volatilities, over a period of time, equivalent to the expected life of the instrument being valued, of similarly positioned public companies within our industry. The risk-free interest rate was determined from the implied yields from U.S. Treasury zero-coupon bonds with a remaining term consistent with the expected term of the instrument being valued.

Stock Options to Employees and Non-Employees

During the years ended December 31, 2014 and 2015, we granted incentive stock options for the purchase of 491,200 and 77,500 shares, respectively, of our common stock to our employees and consultants. The options granted in 2014 have an exercise price range of $5.79 per share to $8.06 per share with a term ranging from three years to ten years. The options granted in 2015 have an exercise price range of $3.83 per share to $12.98 per share with a term of ten years. The options vest over various periods, generally quarterly over sixteen quarters. The options granted in 2014 had an aggregate grant date fair value of $2.0 million and the options granted in 2015 had an aggregate grant date fair value of $384,000 utilizing the Black-Scholes option valuation model.

We estimated the fair value of stock options awarded during the years ended December 31, 2014 and 2015 using the Black-Scholes option valuation model. The fair values of stock options granted for the years were estimated using the following assumptions:

	Option Grants Awarded During the Year Ended December 31, 2014	**Option Grants Awarded During the Year Ended December 31, 2015**
Dividend Yield	0%	0%
Expected Volatility	56.6% - 82.2%	60.0%
Risk-free interest rate	1.52% - 2.56%	1.44% - 1.86%
Expected Term	4 to 7 years	7 years

Stock-based compensation expense related to stock options for employees was $413,000 and $451,000 for the years ended December 31, 2014 and 2015, respectively. We are also required to estimate forfeitures at the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from our estimates. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent that actual forfeitures differ from our estimates, the difference is recorded as a cumulative adjustment in the period the estimates were revised. For the years ended December 31, 2014 and 2015, there was no forfeiture rate applied as there have been very minimal forfeitures since the grant of awards. We do not expect to incur forfeitures for those shares currently awarded.

For stock options paid in consideration of services rendered by non-employees, we recognize compensation expense in accordance with the requirements of ASC 505-50. Non-employee stock option grants that do not vest immediately upon grant are recorded as an expense over the vesting period. At the end of each financial reporting period prior to performance, the value of these stock options, as calculated using the Black-Scholes option valuation model, is determined, and compensation expense recognized or recovered during the period is adjusted accordingly. Since the fair market value of stock options granted to non-employees is subject to change in the future, the amount of the future compensation expense is subject to adjustment until the common stock options are fully vested. Stock-based compensation expense related to stock options for consultants was $284,000 and $60,000 for the years ended December 31, 2014 and 2015, respectively.

Stock Option Award Activity

The following is a summary of our stock option activity during the year ended December 31, 2014:

	Number of Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Life In Years
Outstanding, January 1, 2014	—	$ —	$ —	—
Granted	491,200	6.29	4.14	9.42
Exercised	—	—	—	—
Canceled/Forfeited	—	—	—	—
Outstanding, December 31, 2014	491,200	$ 6.29	$ 4.14	9.42
Exercisable, January 1, 2014	—	$ —	$ —	—
Vested	142,895	6.02	4.01	9.41
Exercised	—	—	—	—
Canceled/Forfeited	—	—	—	—
Exercisable, December 31, 2014	142,895	$ 6.02	$ 4.01	9.41

The following is a summary of our stock option activity during the year ended December 31, 2015:

	Number of Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Life In Years
Outstanding, January 1, 2015	491,200	$ 6.29	$ 4.14	9.42
Granted	77,500	8.36	4.95	9.27
Exercised	—	—	—	—
Canceled/Forfeited	(3,650)	7.28	4.51	—
Outstanding, December 31, 2015	565,050	$ 6.57	$ 4.25	7.84
Exercisable, January 1, 2015	142,895	$ 6.02	$ 4.01	9.41
Vested	160,720	6.47	4.21	6.70
Exercised	—	—	—	—
Canceled/Forfeited	(1,200)	8.06	5.19	—
Exercisable, December 31, 2015	302,415	$ 6.25	$ 4.11	7.07

The following table presents information related to stock options outstanding and exercisable at December 31, 2015:

Options Outstanding		Options Exercisable	
Exercise Price	Outstanding Number of Options	Weighted Average Remaining Life In Years	Exercisable Number of Options
$3.83 - $6.00	390,250	6.77	257,744
$6.49 – $6.97	47,500	8.70	14,693
$7.20 – $8.06	97,300	8.82	24,350
$11.44 - $12.98	30,000	9.15	5,628
	565,050	7.07	302,415

As of December 31, 2015, there was $1.1 million of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted average vesting period of approximately 2.5 years. The aggregate instrinsic value of outstanding options and options vested as of December 31, 2014 were $2.6 million and $800,000, respectively, which represent options whose exercise price was less than the closing fair market value of our common stock on December 31, 2014 of $11.62 per share. The aggregate instrinsic value of outstanding options and options vested as of December 31, 2015 were zero as there were no options whose exercise price was less than the closing fair market value of our common stock of $2.65 per share. There were no excess tax benefits realized for tax deductions from stock options exercised during the years ended December 31, 2015 and 2014 as no options were exercised.

Restricted Stock Units Activity

We account for restricted stock units issued to employees at fair value, based on the market price of our stock on the date of grant, net of estimated forfeitures. The fair value of non-employee restricted stock units awarded are remeasured as the awards vest, and the resulting increase in fair value, if any, is recognized as expense in the period the related services are rendered. During the years ended December 31, 2014 and 2015 we recorded $333,000 and $849,000, respectively, of stock-based compensation related to the restricted stock unit shares that have been issued to-date. During the years ended December 31, 2014 and 2015 we granted 174,500 and 343,930 restricted stock unit shares, respectively. Shares vested during the years ended December 31, 2014 and 2015 were 43,233 and 73,122, respectively, of which 3,915 and 4,341 shares, respectively, were surrendered by the employees for payment of payroll tax withholding liabilities. During the year ended December 31, 2015 there were 26,446 shares canceled as a result of an employee termination. There were no cancelations during the year ended December 31, 2014.

A summary of restricted stock unit activity for the years ended December 31, 2014 is as follows:

	Number of Restricted Share Units	Weighted-Average Grant-Date Fair Value
Outstanding at January 1, 2014	—	$ —
Granted	174,500	6.00
Vested	(43,233)	6.00
Canceled	—	—
Outstanding at December 31, 2014	131,267	$ 6.00

A summary of restricted stock unit activity for the years ended December 31, 2015 is as follows:

	Number of Restricted Share Units	Weighted-Average Grant-Date Fair Value
Outstanding at January 1, 2015	131,267	$ 6.00
Granted	343,930	6.35
Vested	(73,122)	6.07
Canceled	(26,446)	(8.06)
Outstanding at December 31, 2015	375,629	$ 6.16

As of December 31, 2015, there was $1.7 million of unrecognized compensation expense related to unvested restricted stock unit agreements which is expected to be recognized over a weighted-average period of approximately 2.8 years. For restricted stock unit awards subject to graded vesting, we recognize compensation cost on a straight-line basis over the service period for the entire award.

Performance Awards

In 2015, we adopted a performance based bonus program which identifies five specific performance objectives to be accomplished during 2015 for all employees. The awards contain a combination of service conditions and performance conditions based on the achievement of specified performance thresholds approved by the board.

The performance bonus amounts are based on each individual's salary paid during the year multiplied by the bonus multiplier percentage ranging from 6.67% to 13.34% per objective plus an additional 10% bonus for non-executive employees and a multiplier percentage ranging from 16.67% to 25.00% per objective for executive employees. The performance bonus will be paid in the form of restricted stock units which will vest half on the issuance date and the remaining half on the first business day of 2017. The number of shares granted to each employee will be determined based on the performance bonus amount divided by $2.68, the 10-day average stock price prior December 31, 2015. We recognize stock-based compensation expense for restricted stock units with performance conditions based on the probability of the performance condition being met, net of estimated pre-vesting forfeitures. For the year ended December 31, 2015, we recorded $121,000 of stock-based compensation which represents one-half of the total $242,000 performance bonus amount. The performance bonus amount has been recorded, as the achievement of the performance conditions were considered attained. Subsequent to year end, on February 5, 2016, a total of 90,265 restricted stock units were granted related to the 2015 performance bonus program. One half of the units awarded, 45,140 shares, vested on February 19, 2016 and the remaining half will vest on January 3, 2017.

Total equity-based compensation cost recorded in the consolidated statements of operations, which includes the value of stock options and restricted stock units issued to employees, directors and non-employees for services and excludes the performance bonus accrual and warrant consultant cost, is allocated as follows:

	Year Ended December 31, 2014	Year Ended December 31, 2015
Research and development		
Employees	$ 320,000	$ 609,000
Non-employees	72,000	33,000
General and administrative		
Employees and directors	414,000	664,000
Non-employees	224,000	54,000
	$ 1,030,000	$ 1,360,000

Common Stock Issued to Non-Employees

In September 2015, we issued a total of 33,000 shares of our common stock to two consultants in exchange for business and corporate development services provided both in Asia and in the United States. We recorded $156,000 in stock compensation expense related to these stock issuances for the year ended December 31, 2015, which represents the fair value of the stock on the date of issuance. There were no similar items, or expense recorded, for the year ended December 31, 2014.

NOTE 9—COMMITMENT AND CONTINGENCIES

In October 2013, we signed a lease for new office space for our corporate headquarters, and moved into the new location in the first quarter of 2014. The lease had a term of 38 months and a rental cost of approximately $5,412 per month, increasing 3% annually after the first fourteen months. In addition, our share of building operating costs were estimated to be $2,101 per month. In April 2014, we amended the lease to add additional space which increased our rent to $8,286 per month beginning August 1, 2014 plus estimated monthly operating costs of $3,154 and extended the lease term through July, 2017. We have a renewal option for an additional 3 year term. The original lease included a tenant improvement allowance of $72,160 and the amended lease included an additional tenant improvement allowance of $38,320. The allowances were used to construct our office build-out and have been capitalized as leasehold improvements and construction-in-process as of December 31, 2014 and as leasehold improvements as of December 31, 2015 as construction has been completed. The capitalized costs are being amortized over the amended lease term through July 2017.

In November 2013, we signed a lease for our satellite development office in Burlingame, CA. The lease had a two-year term, and rental costs of approximately $4,000 per month. In May 2015, we renewed the lease for a one year period expiring November 30, 2016 with rental costs of $5,000 per month.

Rent expense related to our facilities and equipment was $163,000 and $128,000, respectively, for the years ended December 31, 2015 and December 31, 2014.

Future minimum rent payments are as follow:

Years ending December 31,		
2016	$	205,000
2017		90,000
Total minimum rent payments	$	295,000

Legal Proceedings—We are occasionally involved in legal proceedings and other matters arising from the normal course of business.

Beginning on March 17, 2015, three putative class action lawsuits were filed in the United States District Court for the Central District of California, naming us, Terry Lingren and John Philpott as defendants. The three lawsuits were consolidated into a single putative class action, *In re Resonant Inc. Securities Litigation*, Case No. 15-cv-01970 SJO (VBKx), and the court appointed co-lead plaintiffs. On September 26, 2015, the plaintiffs filed a consolidated complaint purporting to assert claims under the federal securities laws against us, Terry Lingren, John Philpott, and the underwriter of our May 29, 2014 IPO. The plaintiffs purported to be acting on behalf of a class consisting of purchasers or acquirers of our common stock between May 28, 2014 and April 2, 2015, or the Class Period, as well as a subclass of persons or entities who purchased or acquired our shares in (or traceable to) our IPO. The plaintiffs allege that, as a result of the defendants' allegedly false and/or misleading statements and/or omissions concerning our business, operations, prospects and performance, our common stock traded at artificially inflated prices throughout the Class Period. The plaintiffs seek compensatory damages and fees and costs, among other relief, but have not specified the amount of damages being sought in the action. We filed a motion to dismiss the consolidated complaint on November 30, 2015. *(See Note 14 for an update.)*

On September 24, 2015, a purported shareholder derivative action was filed in the United States District Court for the Central District of California, and is pending before the same federal district court judge to whom the putative class action has been assigned. In the derivative action, the plaintiffs allege that certain of our officers and directors breached their fiduciary duties to us by violating the federal securities laws and exposing us to possible financial liability. On November 16, 2015, the court entered an order staying the proceedings in the shareholder derivative action pending certain further developments. We intend to continue to defend ourselves vigorously in these actions.

We have directors' and officers' liability insurance, which will be utilized in the defense of these matters. The liability insurance may not cover all of the future liabilities we may incur in connection with the foregoing matters. As of December 31, 2015, we have incurred legal expenses of approximately $349,000 and expect to incur additional costs to defend these suits in the future.

Legal fees and other costs associated with such actions are expensed as incurred. We assess, in conjunction with our legal counsel, the need to record a liability for litigation and contingencies. Litigation accruals are recorded when and if it is determined that a loss related matter is both probable and reasonably estimable. Material loss contingencies that are reasonably possible of occurrence, if any, are subject to disclosure. Based on the very early stage of litigation for the cases referred to above, it is not possible to estimate the amount or range of possible loss that might result from an adverse judgment or a settlement of these matters. We will evaluate developments in legal proceedings and other matters on a quarterly basis. As of December 31, 2014 and 2015, there was no litigation or contingency with at least a reasonable possibility of a material loss. No losses have been recorded during the years ended December 31, 2014 and 2015, respectively, with respect to litigation or loss contingencies. *(See Note 14 for an update.)*

NOTE 10—FAIR VALUE MEASUREMENTS AND DERIVATIVE INSTRUMENTS

We measure our financial assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., exit price) in an orderly transaction between market participants at the measurement date. Additionally, we are required to provide disclosure and categorize assets and liabilities measured at fair value into one of three different levels depending on the assumptions (i.e., inputs) used in the valuation. Level 1 provides the most reliable measure of fair value while Level 3 generally requires significant management judgment. Financial assets and liabilities are classified in their entirety based on the lowest level of input significant to the fair value measurement. The fair value hierarchy is defined as follows:

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

Level 2—Valuations are based on quoted prices for similar assets or liabilities in active markets, or quoted prices in markets that are not active for which significant inputs are observable, either directly or indirectly.

Level 3—Valuations are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. Inputs reflect management's best estimate of what market participants would use in valuing the asset or liability at the measurement date.

Our common stock purchase warrants issued in conjunction with debt and consulting services are detachable, or free standing, instruments. In addition, we have recorded a derivative liability associated with the conversion feature in our Senior Convertible Note. We estimate fair values of these warrants and derivative liabilities utilizing Level 3 inputs for all classes of warrants and derivative liabilities issued. Other than the Financing Warrant and Senior Convertible Note derivative liability, we use the Black-Scholes option valuation technique as it embodies all of the requisite assumptions (including trading volatility, remaining term to maturity, market price, strike price, and risk free rates) necessary to fair value these instruments. To determine the value of the Financing Warrant and Senior Convertible Note derivative liability, we used a Monte Carlo option-pricing model, which takes into consideration the market values of comparable public companies, considering among other factors, the use of multiples of earnings, and adjusted to reflect the restrictions on the ability of our shares to trade in an active market. We determined that as the Financing Warrant and debt conversion can only be exercised upon the probability of satisfying a performance condition such as a Qualifying IPO or Fundamental Transaction, as provided for in the applicable instrument, and thus a closed-form model such as the Black-Scholes option valuation model would not be appropriate. (*See Note 6*).

The following assumptions were used in the Black-Scholes option-pricing model to determine the fair value of the warrant liabilities:

	IPO Date
Assumptions:	
Risk-free interest rate	1.25% - 2.31%
Expected dividend yield	0%
Expected volatility	64.0% - 69.6%
Expected term (in years)	3.58 – 5.95

We used a fair value per share of our common stock of $6.00 as of the IPO Date to determine the fair value of derivative and warrant liabilities.

We estimated the fair value of our warrants and Senior Convertible Note derivative at the time of issuance and subsequently remeasured the fair value using the Black-Scholes option valuation model or Monte Carlo option-pricing model as discussed above, at each reporting date through the IPO Date, using the following inputs: the risk-free interest rates; the expected dividend rates; the remaining expected life of the warrants; and the expected volatility of the price of the underlying common stock. Under the Monte Carlo option-pricing model we estimated the fair value of the Senior Convertible Note derivative liability and Financing Warrant liability at the time of issuance and subsequent remeasurement dates considering the probability of achieving a milestone, the cost of capital, and the estimated time period the right would be outstanding. The estimates were based, in part, on subjective assumptions and could differ materially following the measurement date (*see Note 6*). Changes to these assumptions as well as our stock price on the reporting date could have had a significant impact on the fair value of the warrant liabilities until the IPO Date.

As a result of the expiration of the redemption and put option features included in the Bridge Warrants, Consulting Warrant and Financing Warrant as of the IPO Date, under accounting rules, these warrant liabilities are no longer classified as liabilities. There are no warrant liabilities or other liabilities to be measured at fair value on a recurring basis as of December 31, 2014.

The following table provides a reconciliation of all liabilities measured at fair value using Level 3 significant unobservable inputs:

	Warrant Liabilities(1)	Senior Convertible Note Derivative Liability(2)
Balance at January 1, 2014	$ 3,276,084	$ 5,056,502
Issuance of warrant and derivative liabilities	—	—
Change in fair value	382,327	1,633,272
Write-off due to conversion and IPO	(3,658,411)	(6,689,774)
Balance at December 31, 2014	$ —	$ —

(1) The change in the fair value of the warrants was recorded as a reduction to other income in the consolidated statement of operations of $382,000 for the year ended December 31, 2014. Due to the expiration of the redemption and put option features included in the Bridge Warrants, Consulting Warrant and Financing Warrant as of the IPO Date, these warrant liabilities were recorded as an increase of $3.7 million to additional paid-in capital in the consolidated balance sheet as of December 31, 2014.

(2) The extinguishment of the senior convertible note derivative liability was recorded as an increase of $5.5 million to additional paid-in capital and a gain of $1.6 million to other income in the consolidated statement of operations for the year ended December 31, 2014.

NOTE 11—INCOME TAXES

The income taxes by jurisdiction consist of the following for the years ended December 31, 2014 and 2015:

	Year Ended December 31, 2014	Year Ended December 31, 2015
U.S. federal		
Current	$ —	$ —
Deferred	—	—
Total U.S. federal	—	—
U.S. state and local		
Current	1,000	1,000
Deferred	—	—
Total U.S. state and local	1,000	1,000
Total income taxes	$ 1,000	$ 1,000

Income taxes differ from the amounts computed by applying the U.S. federal income tax rate to pretax income (loss) before income taxes as a result of the following for the years ended December 31, 2014 and 2015:

	Year ended December 31, 2014	Year ended December 31, 2015
Expected income tax expense	$ (3,308,000)	$ (3,291,000)
State income tax (benefit), net of federal benefit and federal valuation allowance	1,000	1,000
Valuation Allowance (net of state)	2,868,000	3,426,000
Permanent Differences:		
Stock Options	—	131,000
Change in Fair Market Value — Financing Warrant Expenses	130,000	—
Other	147,000	10,000
Interest Expenses — Disqualified Debt	514,000	—
Research & Development Credit	(169,000)	(174,000)
Adjustment to Deferred Taxes	(182,000)	(102,000)
Total provision for income taxes	$ 1,000	$ 1,000

For each of the years ended December 31, 2014 and 2015, income tax expense was $1,000. Deferred income tax reflects the tax effects of temporary differences that gave rise to significant portions of our deferred tax assets and liabilities. Deferred income taxes consisted of the following as of December 31, 2014 and December 31, 2015:

	Year ended December 31, 2014	Year ended December 31, 2015
Deferred tax assets—current:		
Accrued Expenses	$ 3,000	$ —
Accrued Payroll	6,000	—
Deferred Rent	36,000	—
Total current assets	45,000	—
Deferred tax assets—long term:		
Accrued Payroll	—	95,000
Intangibles	779,000	763,000
Organization Cost	17,000	—
Start-up Expenditures	1,691,000	—
Research & Development Credit	492,000	804,000
Net Operating loss	1,374,000	6,592,000
Stock Compensation	140,000	379,000
New Jobs Credit	7,000	7,000
Total long-term assets	4,500,000	8,640,000
Total deferred tax assets	4,545,000	8,640,000
Less: Valuation Allowance	(4,520,000)	(8,639,000)
Deferred tax liabilities—current:	—	—
Total current liabilities	—	—
Deferred tax liabilities—long term:		
Fixed Assets	(25,000)	(1,000)
Total long-term liabilities	(25,000)	(1,000)
Total deferred tax liabilities	(25,000)	(1,000)
Net deferred tax assets	$ —	$ —

We recorded a full valuation allowance against our net deferred tax assets at December 31, 2014 and December 31, 2015. In determining the need for a valuation allowance, we reviewed all available evidence pursuant to the requirements of FASB ASC 740. Based upon our assessment of all available evidence, we have concluded that it is more likely than not that the net deferred tax assets will not be realized. For the year ended December 31, 2015, the valuation allowance increased by $4.1 million. For the year ended December 31, 2014, the valuation allowance increased by $1.3 million. This net increase included a decrease in valuation allowance of $2.2 million due to the reversal of the deferred tax asset associated with Derivatives, which were recorded to additional paid-in capital during the year.

As of December 31, 2015, we had federal net operating loss carryforwards of approximately $16.7 million and state net operating loss carryforwards of approximately $16.6 million. The federal net operating loss carryforwards will begin to expire in 2033, and the state net operating loss carryforwards will begin to expire in 2033. Our ability to utilize net operating loss carryforwards may be limited in the event that a change in ownership, as defined in Section 382 of the Internal Revenue Code, occurs in the future. In the event a change of ownership occurs, it will limit the annual usage of the carryforwards in future years. Management believes that certain changes in control have occurred which resulted in limitations on our net operating loss carryforwards; however, management has determined that these limitations will not impact the ultimate utilization of the net operating loss carryforwards.

We recognize interest and penalties related to income tax matters in income taxes, and there were none during the years ended December 31, 2014 and 2015.

The adoption of ASC 740 guidance required us to identify, evaluate and measure all uncertain tax positions taken or to be taken on tax returns and to record liabilities for the amount of these positions that may not be sustained, or may only partially be sustained, upon examination by the relevant taxing authorities. Although we believe that our estimates and judgments were reasonable, actual results may differ from these estimates. Some or all of these judgments are subject to review by the taxing authorities. We have no significant uncertain tax positions for the years ended December 31, 2014 and 2015.

Our annual income taxes and the determination of the resulting deferred tax assets and liabilities involve a significant amount of judgment. Our judgments, assumptions and estimates relative to current income taxes take into account current tax laws, their interpretation of current tax laws and possible outcomes of future audits conducted by domestic tax authorities. We operate within federal and state taxing jurisdictions and are subject to audit in these jurisdictions. These audits can involve complex issues which may require an extended period of time to resolve. We are currently not being examined by any tax authorities. The company is subject to taxation in the United States, California, and Massachusetts. As of December 31, 2015 the Company’s tax years remain open to examination by the taxing authorities for all years since the incorporation in 2013.

NOTE 12—RELATED PARTY TRANSACTIONS

We rented office space from STI at a rate of $3,723 per month pursuant to a month-to-month lease from July 2013 to March 2014. Total rent expense recorded for STI was $5,411 for the year ended December 31, 2014. There were no other related party transactions in 2014. There were no related party transactions in 2015.

NOTE 13—EMPLOYEE BENEFIT PLAN

We have a 401(k) Savings Retirement Plan that covers substantially all full-time employees who meet the plan’s eligibility requirements and provides for an employee elective contribution and employer matching contributions. We recorded matching contributions to the plan of $105,000 and $173,000 for the years ended December 31, 2014 and December 31, 2015, respectively.

NOTE 14—SUBSEQUENT EVENTS

On February 8, 2016, the court granted our motion to dismiss the consolidated complaint in the putative class action - *In re Resonant Inc. Securities Litigation*, but granted the plaintiffs leave to file a second amended complaint. On February 23, 2016, the plaintiffs filed a consolidated second amended complaint purporting to assert claims under the federal securities laws against us, Terry Lingren, John Philpott, and the underwriter of our May 29, 2014 IPO. On March 22, 2016, we filed a motion to dismiss the consolidated second amended complaint. It is not known when the court will rule on the motion.

We evaluated subsequent events through March 24, 2016, the date of issuance of the consolidated financial statements for the year ended December 31, 2015.

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 phrase “disclosure controls and procedures” refers to controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended, or the Exchange Act, such as this Annual Report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the U.S. Securities and Exchange Commission, or SEC. Disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including our chief executive officer, or CEO, and chief financial officer, or CFO, as appropriate to allow timely decision regarding required disclosure.

Our management, with the participation of our CEO and CFO, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a- 15(e) and 15d- 15(e) under the Exchange Act), as of December 31, 2015, the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of December 31, 2015, our disclosure controls and procedures were designed at a reasonable assurance level and were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles.

Our management, with the participation of our CEO and CFO, has assessed the effectiveness of the internal control over financial reporting as of December 31, 2015. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in *Internal Control - Integrated Framework (2013 Framework)*. Based on this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2015.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm on our internal control over financial reporting due to an exemption established by the JOBS Act for “emerging growth companies.”

Changes in Internal Controls over Financial Reporting

There was no change in our internal control over financial reporting identified in management’s evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the quarter ended December 31, 2015 that materially affected, or is reasonable likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference to the disclosure appearing under the headings “Election of Directors,” “Executive Officers,” “Board of Directors and Corporate Governance” and “Other Matters” in our Proxy Statement for our 2016 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2015.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to the disclosure appearing under the heading “Executive Compensation” in our Proxy Statement for the 2016 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2015.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated by reference to the disclosure appearing under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our Proxy Statement for the 2016 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2015.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to the disclosure appearing under the heading “Certain Relationships and Related Party Transactions” and “Board of Directors and Corporate Governance — Director Independence” in our Proxy Statement for the 2016 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2015.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference to the disclosure appearing under the heading “Ratification of Appointment of Independent Registered Public Accounting Firm” in our Proxy Statement for the 2016 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2015.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

We have filed the following documents as part of this Annual Report on Form 10-K:

1. Consolidated Financial Statements

   Our consolidated financial statements are listed in the "Index to Consolidated Financial Statements" under Part II, Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules

   All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included in our consolidated financial statements and related notes.

3. Exhibits

   See the Exhibit Index immediately following the signature pages of this Annual Report on Form 10-K.

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.

Dated: March 24, 2016

Resonant Inc.

By: /s/ JOHN PHILPOTT
JOHN PHILPOTT
Chief Financial Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Terry Lingren and John Philpott, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution for him, and in his name 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 exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them or his or her 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/ Terry Lingren Terry Lingren	Chief Executive Officer and Director *(Principal Executive Officer)*	March 24, 2016
/s/ Robert Hammond Robert Hammond	Chief Technology Officer and Director	March 24, 2016
/s/ George B. Holmes George B. Holmes	President, Chief Commercial Officer and Director	March 24, 2016
/s/ John E. Major John E. Major	Chairman of the Board of Directors	March 24, 2016
/s/ Janet K. Cooper Janet K. Cooper	Director	March 24, 2016
/s/ Michael J. Fox Michael J. Fox	Director	March 24, 2016
/s/ Thomas Joseph Thomas Joseph	Director	March 24, 2016
/s/ Richard Kornfeld Richard Kornfeld	Director	March 24, 2016

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-36467	3.1	6/5/2014	
3.2	Amended and Restated Bylaws of the Registrant	8-K	001-36467	3.2	6/5/2014	
4.1	Form of the Registrant's common stock certificate	S-1/A	333-193552	4.1	4/11/2014	
4.2	Form of Underwriter's Warrant	S-1/A	333-193552	4.2	5/16/2014	
10.1*	Form of Indemnification Agreement between the Registrant and each of its directors and officers	S-1	333-193552	10.1	1/24/2014	
10.2	Registrant's amended and restated 2014 Omnibus Incentive Plan, including form agreements	S-1/A	333-193552	10.2	4/11/2014	
10.3*	Offer Letter between the Registrant and Terry Lingren, dated June 17, 2013	S-1	333-193552	10.3	1/24/2014	
10.4*	Offer Letter between the Registrant and Robert Hammond, dated June 17, 2013	S-1	333-193552	10.4	1/24/2014	
10.5*	Offer Letter between the Registrant and Neal Fenzi, dated June 17, 2013	S-1	333-193552	10.5	1/24/2014	
10.6*	Outside Director Compensation Policy					X
10.7	Amendment to Securities Purchase Agreement, dated September 14, 2013, by and among the Registrant and the Required Holders party thereto	S-1	333-193552	10.15	1/24/2014	
10.8	Registration Rights Agreement for Investors, dated June 17, 2013, by and among the Registrant and the persons listed on Schedule A thereto	S-1	333-193552	10.23	1/24/2014	
10.9	Registration Rights Agreement for Warrants, dated June 17, 2013, by and among the Registrant and MDB Capital Group LLC	S-1	333-193552	10.24	1/24/2014	
10.10	Amended and Restated Warrant to Purchase Common Stock, dated November 15, 2013, issued by the Registrant in favor of MDB Capital Group LLC for 222,222 shares of common stock	S-1	333-193552	10.25	1/24/2014	
10.11	Amended and Restated Warrant to Purchase Common Stock, dated November 15, 2013, issued by the Registrant in favor of MDB Capital Group LLC for a to-be-determined number of shares of common stock	S-1	333-193552	10.26	1/24/2014	
10.12	Warrant to Purchase Common Stock (No. A-1), dated June 17, 2013, issued by the Registrant in favor of Terry Lingren for 41,666 shares of common stock	S-1	333-193552	10.27	1/24/2014	
10.13	Warrant to Purchase Common Stock (No. A-2), dated June 17, 2013, issued by the Registrant in favor of Robert Hammond for 41,666 shares of common stock	S-1	333-193552	10.28	1/24/2014	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
10.14	Warrant to Purchase Common Stock (No. A-3), dated June 17, 2013, issued by the Registrant in favor of Neal Fenzi for 41,666 shares of common stock	S-1	333-193552	10.29	1/24/2014	
10.15	Warrant to Purchase Common Stock (No. A-4), dated June 17, 2013, issued by the Registrant in favor of Terry Lingren for 41,667 shares of common stock	S-1	333-193552	10.30	1/24/2014	
10.16	Warrant to Purchase Common Stock (No. A-5), dated June 17, 2013, issued by the Registrant in favor of Robert Hammond for 41,667 shares of common stock	S-1	333-193552	10.31	1/24/2014	
10.17	Warrant to Purchase Common Stock (No. A-6), dated June 17, 2013, issued by the Registrant in favor of Neal Fenzi for 41,667 shares of common stock	S-1	333-193552	10.32	1/24/2014	
10.18.1	Multi-Tenant Industrial Lease, dated August 9, 2013, between the Registrant and Nassau Land Company, L.P.	S-1	333-193552	10.33	1/24/2014	
10.18.2	First Amendment to Lease, dated March 20, 2014, between Registrant and Nassau Land Company, L.P.	10-K	001-36467	10.33.2	3/27/2015	
10.18.3	Second Amendment to Lease, dated September 15, 2014, between Registrant and Nassau Land Company, L.P.	10-K	001-36467	10.33.3	3/27/2015	
10.19.1	Standard Multi-Tenant Office Lease—Gross, dated November 14, 2013, between the Registrant and SeaBreeze I Venture—TIC.	S-1	333-193552	10.34	1/24/2014	
10.19.2	First Amendment to Lease, dated May 5, 2015, between the Registrant and SeaBreeze I Venture—TIC.	10-Q	001-36467	10.10	8/13/2015	
10.20*	Offer Letter between the Registrant and John Philpott, dated March 10, 2014	S-1/A	333-193552	10.37	3/24/2014	
10.21	Warrant Agreement issued to MZ Group	10-Q	001-36467	10.30	8/8/2014	
10.22	Warrant Agreement issued to Investor Relations Consultant	10-K	001-36467	10.40	3/27/2015	
10.23*	Form of Severance/Change-in-Control Agreement	10-K	001-36467	10.41	3/27/2015	
10.24*	Offer Letter between the Registrant and Mike Eddy, dated August 16, 2014	10-K	001-36467	10.42	3/27/2015	
10.25*	Offer letter between the Registrant and George B. Holmes, dated February 9, 2016	8-K	001-36467	10.1	2/29/2016	
10.26*	Restricted Stock Unit Agreement, with a grant date of February 29,2016 between the Registrant and George B. Holmes	8-K	001-36467	10.2	2/29/2016	
21.1	List of Subsidiaries	S-1	333-193552	21.1	1/24/2014	
23.1	Consent of Squar Milner LLP (formerly Squar, Milner, Peterson, Miranda & Williamson, LLP)					X
23.2	Consent of Crowe Horwath LLP					X
24.1	Power of Attorney (included on signature page)					X

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
31.1	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1#	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

* Each a management contract or compensatory plan or arrangement required to be filed as an exhibit to this annual report on Form 10-K.

\# The information in this exhibit is furnished and deemed not filed with the Securities and Exchange Commission for purposes of section 18 of the Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of Resonant Inc. under the Securities Act of 1933, as amended, or the Exchange Act of 1934, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Exhibit 10.6

OUTSIDE DIRECTOR COMPENSATION POLICY

RESONANT INC.

(Revised Effective as of August 6, 2015)

Resonant Inc. (the "**Company**") believes that the granting of equity and cash compensation to members of its Board of Directors (the "**Board**," and members of the Board, " **Directors**") represents a powerful tool to attract, retain and reward Directors who are not employees of the Company ("**Outside Directors**"). This Outside Director Compensation Policy (the "**Policy**") is intended to formalize the Company's policy regarding cash compensation and grants of equity to its Outside Directors. Unless otherwise defined herein, capitalized terms used in this Policy will have the meaning given such term in the Company's 2014 Omnibus Incentive Plan (the "**Plan**"). Outside Directors will be solely responsible for any tax obligations they incur as a result of the equity and cash payments received under this Policy.

I. ANNUAL RETAINERS

Each Outside Director will receive an annual retainer of $50,000 in cash for serving on our board of directors. The Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will receive an additional annual cash retainer of $25,000. Outside Directors will be reimbursed for reasonable travel and other expenses in accordance with the Company's then current reimbursement policies.

II. PAYMENT

Each annual retainer will be paid ratably on a fiscal quarterly basis to each Outside Director who has served in the relevant capacity for the immediately preceding fiscal quarter no later than thirty (30) days following the end of such preceding fiscal quarter. For purposes of clarification, an Outside Director who has served as an Outside Director or as Chairman of the Board or Lead Independent Director, as applicable, during only a portion of the immediately preceding fiscal quarter will receive a pro-rated payment of the quarterly payment of the applicable annual retainer(s), calculated based on the number of days such Outside Director has served in the relevant capacities.

III. REVISIONS

The Board in its discretion may change and otherwise revise the terms of the cash compensation granted under this Policy, including, without limitation, the amount of cash and timing of unearned compensation to be paid on or after the date the Board determines to make any such change or revision.

IV. EQUITY COMPENSATION

Outside Directors will be entitled to receive all types of Awards under the Plan, including discretionary Awards not covered under this Policy. Any Award granted pursuant to this Policy will be subject to the other terms and conditions of the Plan and form of award agreement approved for use under the Plan. All grants of Awards to Outside Directors pursuant to this Policy will, except as otherwise provided herein, be made in accordance with the following provisions:

(a) Initial Award. Each person upon first becoming an Outside Director will be granted a Restricted Stock Unit Award of 24,000 Restricted Stock Units (the "**Initial RSU Award**") on the date of the first Board or Compensation Committee meeting occurring on or after the date on which such person first becomes an Outside Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy; provided, however, that a Director who is an Employee (an "**Inside Director**") who ceases to be an Inside Director, but who remains a Director, will not receive an Initial RSU Award. The shares underlying the Initial RSU Award will vest as to one-half of the shares subject to such award on each of the first and second anniversary of the commencement of the individual's service as an Outside Director, subject to continued service as a director through the applicable vesting date.

(b) Annual Award. Each Outside Director will be automatically granted a Restricted Stock Unit Award with a Value of $50,000 (the "**Annual RSU Award**"), provided that the number of Shares covered by the Annual RSU Award shall be rounded down to the nearest whole Share, on the date of each annual meeting of stockholders (each, an "**Annual Meeting**"), if, as of such Annual Meeting date, he or she will have served on the Board as a Director for at least the preceding six (6) months; provided that any Outside Director who is not continuing as a Director following the applicable Annual Meeting will not receive an Annual RSU Award with respect to such Annual Meeting. One-half of the shares underlying the Annual RSU Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Annual RSU Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as a director through the applicable vesting date.

(c) Chairman or Lead Independent Director Awards . An Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will receive the following additional Awards:

(i) Initial Award. The Outside Director upon first becoming Chairman of the Board or Lead Independent Director will be granted a Restricted Stock Unit Award with a Value equal to $25,000, pro rated based on the number of days remaining from the date on which such Outside Director first becomes Chairman or Lead Independent Director until the first anniversary of the Company's last Annual Meeting (the "**Initial Chairman Award**"), provided that the number of Shares covered by the Initial Chairman Award shall be rounded down to the nearest whole Share, on the date of the first Board or Compensation Committee meeting occurring on or after the date on which such Outside Director first becomes Chairman or Lead Independent Director; provided, however, that an Outside Director who is Chairman of the Board and becomes Lead Independent Director, or is Lead Independent Director and becomes Chairman of the Board, will not receive an Initial Chairman Award as a result of such change in status. One-half of the shares underlying the Initial Chairman Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Initial Chairman Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as Chairman of the Board and/or Lead Independent Director through the applicable vesting date.

(ii) Annual Award. The Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will be automatically granted a Restricted Stock Unit Award with a Value of $25,000 (the "**Annual Chairman Award**"), provided that the number of Shares covered by the Annual Chairman Award shall be rounded down to the nearest whole Share, on the date of each Annual Meeting, if, as of such Annual Meeting date, he or she will have served on the Board as a Director for at least the preceding six (6) months; provided that any Outside Director who is not continuing as a Director following the applicable Annual Meeting will not receive an Annual Chairman Award with respect to such Annual Meeting. One-half of the shares underlying the Annual Chairman Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Annual Chairman Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as Chairman of the Board and/or Lead Independent Director through the applicable vesting date.

(d) Value. For purposes of this Policy, " **Value**" means, with respect to any Annual RSU Award, Initial Chairman Award or Annual Chairman Award, the fair market value of the shares subject to the applicable award on the date of grant, as computed in accordance with our Plan.

(e) No Discretion. No person will have any discretion to select which Outside Directors will be granted an Initial RSU Award, Annual RSU Award, Initial Chairman Award or Annual Chairman Award under this Policy or to determine the number of Shares to be covered by such Initial RSU Award, Annual RSU Award, Initial Chairman Award or Annual Chairman Award, as applicable (except as provided in subsection (f) below and pursuant to the Amendment and Termination provisions of this Policy).

(f) Revisions. The Board in its discretion may change and otherwise revise the terms of Initial RSU Awards, Annual RSU Awards, Initial Chairman Awards and/or Annual Chairman Awards granted under this Policy, including, without limitation, the number of Shares subject thereto, to provide for Initial RSU Awards, Annual RSU Awards, Initial Chairman Awards and/or Annual Chairman Awards of the same or different type (e.g., Options, Restricted Stock Units, or other types of Awards) granted on or after the date the Board determines to make any such change or revision.

V. SECTION 409A

In no event will cash compensation under this Policy be paid after the later of (i) the fifteenth (15th) day of the third (3rd) month following the end of the Company's fiscal year in which the compensation is earned, or (ii) the fifteenth (15th) day of the third (3rd) month following the end of the calendar year in which the compensation is earned, in compliance with the "short-term deferral" exception under Section 409A of the Internal Revenue Code of 1986, as amended, and the final regulations and guidance thereunder, as such may be amended from time to time (together, "**Section 409A**"). It is the intent of this Policy that this Policy and all payments hereunder be exempt from or otherwise comply with the requirements of Section 409A so that none of the compensation to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be so exempt or comply.

VI. AMENDMENT AND TERMINATION

The Board may at any time amend, alter, suspend or terminate the Policy.

VII. EFFECTIVE DATE

This Policy is effective as of the date of its approval by the Company's Board of Directors on August 6, 2015.

Resonant Inc. (the "**Company**") believes that the granting of equity and cash compensation to members of its Board of Directors (the "**Board**," and members of the Board, " **Directors**") represents a powerful tool to attract, retain and reward Directors who are not employees of the Company ("**Outside Directors**"). This Outside Director Compensation Policy (the "**Policy**") is intended to formalize the Company's policy regarding cash compensation and grants of equity to its Outside Directors. Unless otherwise defined herein, capitalized terms used in this Policy will have the meaning given such term in the Company's 2014 Omnibus Incentive Plan (the "**Plan**"). Outside Directors will be solely responsible for any tax obligations they incur as a result of the equity and cash payments received under this Policy.

I. ANNUAL RETAINERS

Each Outside Director will receive an annual retainer of $50,000 in cash for serving on our board of directors. The Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will receive an additional annual cash retainer of $25,000. Outside Directors will be reimbursed for reasonable travel and other expenses in accordance with the Company's then current reimbursement policies.

II. PAYMENT

Each annual retainer will be paid ratably on a fiscal quarterly basis to each Outside Director who has served in the relevant capacity for the immediately preceding fiscal quarter no later than thirty (30) days following the end of such preceding fiscal quarter. For purposes of clarification, an Outside Director who has served as an Outside Director or as Chairman of the Board or Lead Independent Director, as applicable, during only a portion of the immediately preceding fiscal quarter will receive a pro-rated payment of the quarterly payment of the applicable annual retainer(s), calculated based on the number of days such Outside Director has served in the relevant capacities.

III. REVISIONS

The Board in its discretion may change and otherwise revise the terms of the cash compensation granted under this Policy, including, without limitation, the amount of cash and timing of unearned compensation to be paid on or after the date the Board determines to make any such change or revision.

IV. EQUITY COMPENSATION

Outside Directors will be entitled to receive all types of Awards under the Plan, including discretionary Awards not covered under this Policy. Any Award granted pursuant to this Policy will be subject to the other terms and conditions of the Plan and form of award agreement approved for use under the Plan. All grants of Awards to Outside Directors pursuant to this Policy will, except as otherwise provided herein, be made in accordance with the following provisions:

(a) Initial Award. Each person upon first becoming an Outside Director will be granted a Restricted Stock Unit Award of 24,000 Restricted Stock Units (the "**Initial RSU Award**") on the date of the first Board or Compensation Committee meeting occurring on or after the date on which such person first becomes an Outside Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy; provided, however, that a Director who is an Employee (an "**Inside Director**") who ceases to be an Inside Director, but who remains a Director, will not receive an Initial RSU Award. The shares underlying the Initial RSU Award will vest as to one-half of the shares subject to such award on each of the first and second anniversary of the commencement of the individual's service as an Outside Director, subject to continued service as a director through the applicable vesting date.

(b) Annual Award. Each Outside Director will be automatically granted a Restricted Stock Unit Award with a Value of $50,000 (the "**Annual RSU Award**"), provided that the number of Shares covered by the Annual RSU Award shall be rounded down to the nearest whole Share, on the date of each annual meeting of stockholders (each, an "**Annual Meeting**"), if, as of such Annual Meeting date, he or she will have served on the Board as a Director for at least the preceding six (6) months; provided that any Outside Director who is not continuing as a Director following the applicable Annual Meeting will not receive an Annual RSU Award with respect to such Annual Meeting. One-half of the shares underlying the Annual RSU Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Annual RSU Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as a director through the applicable vesting date.

(c) Chairman or Lead Independent Director Awards . An Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will receive the following additional Awards:

(i) Initial Award. The Outside Director upon first becoming Chairman of the Board or Lead Independent Director will be granted a Restricted Stock Unit Award with a Value equal to $25,000, pro rated based on the number of days remaining from the date on which such Outside Director first becomes Chairman or Lead Independent Director until the first anniversary of the Company's last Annual Meeting (the "**Initial Chairman Award**"), provided that the number of Shares covered by the Initial Chairman Award shall be rounded down to the nearest whole Share, on the date of the first Board or Compensation Committee meeting occurring on or after the date on which such Outside Director first becomes Chairman or Lead Independent Director; provided, however, that an Outside Director who is Chairman of the Board and becomes Lead Independent Director, or is Lead Independent Director and becomes Chairman of the Board, will not receive an Initial Chairman Award as a result of such change in status. One-half of the shares underlying the Initial Chairman Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Initial Chairman Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as

Chairman of the Board and/or Lead Independent Director through the applicable vesting date.

(ii) Annual Award. The Outside Director who serves as Chairman of the Board or, if the Chairman of the Board is not an Outside Director, Lead Independent Director, will be automatically granted a Restricted Stock Unit Award with a Value of $25,000 (the "**Annual Chairman Award**"), provided that the number of Shares covered by the Annual Chairman Award shall be rounded down to the nearest whole Share, on the date of each Annual Meeting, if, as of such Annual Meeting date, he or she will have served on the Board as a Director for at least the preceding six (6) months; provided that any Outside Director who is not continuing as a Director following the applicable Annual Meeting will not receive an Annual Chairman Award with respect to such Annual Meeting. One-half of the shares underlying the Annual Chairman Award will vest on the earlier of (i) the day prior to the first annual meeting of stockholders following the grant or (ii) one year from grant, and one-half of the shares underlying the Annual Chairman Award will vest on the earlier of (i) the day prior to the second annual meeting of stockholders following the grant or (ii) two years from grant, subject to continued service as Chairman of the Board and/or Lead Independent Director through the applicable vesting date.

(d) Value. For purposes of this Policy, " **Value**" means, with respect to any Annual RSU Award, Initial Chairman Award or Annual Chairman Award, the fair market value of the shares subject to the applicable award on the date of grant, as computed in accordance with our Plan.

(e) No Discretion. No person will have any discretion to select which Outside Directors will be granted an Initial RSU Award, Annual RSU Award, Initial Chairman Award or Annual Chairman Award under this Policy or to determine the number of Shares to be covered by such Initial RSU Award, Annual RSU Award, Initial Chairman Award or Annual Chairman Award, as applicable (except as provided in subsection (f) below and pursuant to the Amendment and Termination provisions of this Policy).

(f) Revisions. The Board in its discretion may change and otherwise revise the terms of Initial RSU Awards, Annual RSU Awards, Initial Chairman Awards and/or Annual Chairman Awards granted under this Policy, including, without limitation, the number of Shares subject thereto, to provide for Initial RSU Awards, Annual RSU Awards, Initial Chairman Awards and/or Annual Chairman Awards of the same or different type (e.g., Options, Restricted Stock Units, or other types of Awards) granted on or after the date the Board determines to make any such change or revision.

V. SECTION 409A

In no event will cash compensation under this Policy be paid after the later of (i) the fifteenth (15th) day of the third (3rd) month following the end of the Company's fiscal year in which the compensation is earned, or (ii) the fifteenth (15th) day of the third (3rd) month following the end of the calendar year in which the compensation is earned, in compliance with the "short-term deferral" exception under Section 409A of the Internal Revenue Code of 1986, as amended, and the final regulations and guidance thereunder, as such may be amended from time to time (together, "**Section 409A**"). It is the intent of this Policy that this Policy and all payments hereunder be exempt from or otherwise comply with the requirements of Section 409A so that none of the compensation to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be so exempt or comply.

VI. AMENDMENT AND TERMINATION

The Board may at any time amend, alter, suspend or terminate the Policy.

VII. EFFECTIVE DATE

This Policy is effective as of the date of its approval by the Company's Board of Directors on August 6, 2015.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders
Resonant Inc.

We consent to the incorporation by reference in the Registration Statement on Form S-8 (File No. 333-196344) of our report dated March 26, 2015 related to the consolidated balance sheet of Resonant Inc. as of December 31, 2014, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for the year then ended, appearing in this Annual Report on Form 10-K.

/s/ Squar Milner LLP (formally Squar, Milner, Peterson, Miranda & Williamson, LLP)

Los Angeles, California

March 24, 2016

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-196344 on Form S-8 of Resonant Inc. of our report dated March 24, 2016 relating to the consolidated financial statements, appearing in this Annual Report on Form 10-K.

/s/ Crowe Horwath LLP

Sherman Oaks, California

March 24, 2016

Exhibit 31.1

Certification of Principal Executive Officer Pursuant To
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant To
Section 302 of Sarbanes-Oxley Act of 2002

I, Terry Lingren, certify that:

1. I have reviewed this Annual Report on Form 10-K of Resonant Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) 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

   (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of 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 24, 2016

/s/ Terry Lingren
Terry Lingren
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of Principal Financial Officer Pursuant To
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant To
Section 302 of Sarbanes-Oxley Act of 2002

I, John Philpott, certify that:

1. I have reviewed this Annual Report on Form 10-K of Resonant Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) 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

    (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of 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 24, 2016

/s/ John Philpott
John Philpott
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

Certifications of Principal Executive Officer and Principal Financial Officer
Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant To
Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350), Terry Lingren, Chief Executive Officer (Principal Executive Officer) and John M. Philpott, Chief Financial Officer (Principal Financial and Accounting Officer) of Resonant Inc. (the "Company"), hereby certifies that, to the best of his knowledge:

1. Our Annual Report on Form 10-K for the year ended December 31, 2015, to which this Certification is attached as Exhibit 32.1 (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.

Date: March 24, 2016

/s/ Terry Lingren
Terry Lingren
Chief Executive Officer
(Principal Executive Officer)

/s/ John M. Philpott
John M. Philpott
Chief Financial Officer
(Principal Financial and Accounting Officer)