AETRIUM®

Annual Report

2009

Financial Summary

In thousands except for per share amounts	2009	2008
For the year:		
Net sales	$ 8,649	$17,217
Operating expenses	7,364	9,538
Loss from operations	(4,243)	(1,270)
Net loss	$ (6,728)*	$ (612)
Loss per share (basic and diluted)	$ (0.63)*	$ (0.06)
Weighted average shares outstanding (basic and diluted)	10,599	10,583
At year-end:		
Cash and cash equivalents	$ 9,476	$11,629
Total assets	19,394	25,602
Shareholders' equity	18,017	24,100

* Includes $4,064,000 or $0.38 per share of income tax expense related to an increase in a valuation allowance on deferred tax assets. Excluding this expense, net loss and loss per share would have been ($2,664,000) and ($0.25), respectively.

About the Company

Aetrium is a leading supplier of test handlers and other proprietary equipment used by the global semiconductor industry to test integrated circuits.

To Our Shareholders:

The performance of the IC industry in 2009 underscored the industry's reputation as being one of the most cyclical of all the technology industries.

From the beginning of 2009 there was a continuation of the very negative market correction that started in the second half of 2008, triggered by the worldwide financial meltdown. The IC industry faced a precipitous decrease in demand for electronic products, which quickly led to the build up of excessive inventories and low production equipment utilization rates. In the last quarter of 2008 and the first quarter of 2009, the IC industry experienced an unprecedented contraction in revenues and we were impacted accordingly.

The IC industry response to the imbalance in its supply and demand metrics was swift and broad based. It was not uncommon for semiconductor manufacturers to dramatically reduce the output from their production facilities and in some cases shut down production facilities for lengthy periods of time. It was clear that additional capacity would not be required by the industry until excess inventories throughout the supply chain were significantly reduced and IC production equipment utilization rates were substantially increased. The reluctance of consumers to spend on new electronic products exacerbated the problem and it became clear that the downturn for the IC equipment industry would be difficult and protracted.

We responded quickly to the industry contraction through downsizing and cost containment. However, we also maintained our commitment to our future through our continued product development programs and our targeted efforts at expanding our customer base.

Cycles within the semiconductor industry occur on a steady if irregular basis. We can't stop them and can only respond to them as they occur. In late 2008 and early 2009 as the industry cycle was reaching its lowest point, we became very aggressive in our cost containment efforts. We focused our attention on maximizing our operational efficiencies and conserving our cash position in what we expected to be one of our most difficult years. We took several actions to lower our operating costs going forward. Those actions included termination of 15% of our employees, salary reductions of up to 25% for all remaining employees, the curtailing of any 401(k) or bonus payments to employees, and a freeze on pay raises and new hiring. We also took actions that effectively cut and more tightly controlled capital expenditures and travel expenses. In the fourth quarter of 2009 we reinstated half of the salary reductions for most of our employees and reinstated the second half of their salary cuts in the first quarter of 2010. Executive level salary cuts remain in effect at the current time and range up to 25%.

Joseph C. Levesque
Chairman and
Chief Executive Officer

At the same time, we didn't falter on our commitment to new product development or the broadening of our customer base. Our R&D efforts in 2009 continued to be focused on the IC industry's newest generations of IC packages and emerging manufacturing processes. Our development efforts in 2009 included the design of a greatly enhanced and improved IC test handler that we have labeled the V16Max, and some new modules and fixtures for our technology leading Model 1164 reliability test systems.

We expect to begin shipping the V16Max in the second quarter of 2010. We believe the V16Max will further cement our position of offering the most cost effective gravity feed handlers to our existing customers as well as expand our opportunities to replace our competitors in a broadening customer base. The V16Max has been designed specifically for the largest and fastest growing areas of semiconductor devices and packaging technology.

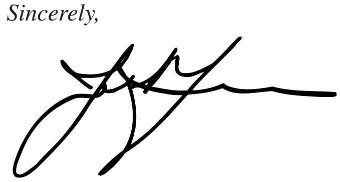
The development of our new modules and fixtures for our Model 1164 reliability test systems has been aimed at emerging processes and different device types associated with a variety of semiconductor technologies and applications. Our design efforts have been in support of and in conjunction with some of our largest customers. We expect to begin shipping against their commitments for the new modules in mid 2010.

During 2009 we continued on a concerted and time consuming strategy and effort to broaden our customer base, and we were successful in adding some new and very important customers. We were also able to expand the use of our products to additional applications at some of our existing customers. We believe that our new products have us uniquely positioned to take advantage of what industry forecasters are predicting will be strong growth in 2010 and 2011 as the industry recovers from the recent down cycle.

We are fortunate that our focus has been on analog semiconductors, which in spite of the bad market conditions faired better than some other semiconductor technologies. Two of the strongest areas of semiconductor demand in 2009 were personal communications technology and computing power for both personal and business applications. Aetrium has a long and successful history of providing mission critical production equipment to support these particular technologies and business segments, and we expect these areas to lead in the IC industry recovery that is now gaining ground.

We expect 2010 will be far more promising for the industry and Aetrium as most industry forecasters are predicting double digit growth for the next two years. We believe we are in a strong competitive position for the coming industry upturn and expect a growing acceptance of our newer product offerings and a continued expansion of our customer base. We also believe we have the management experience and resources to take advantage of the recovering industry. We entered 2010 with a healthy balance sheet and we are working diligently to preserve and utilize our resources wisely. Our current balance sheet remains strong and we expect it will improve as the year progresses. In sum, we believe we are uniquely well positioned to take full advantage of the opportunities that the IC industry will provide us in 2010 and expect that we are once again likely to surpass the average performance of other TAP equipment suppliers on an annualized basis.

Sincerely,



Joseph C. Levesque
Chairman and Chief Executive Officer

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2009
Commission file number 000-22166

AETRIUM INCORPORATED

(Exact name of registrant as specified in its charter)

MINNESOTA (State of incorporation)	**41-1439182** (I.R.S. employer identification no.)

2350 Helen Street **North St. Paul, Minnesota** (Address of principal executive offices)	**55109** (Zip code)	**(651) 770-2000** (Registrant's telephone number)

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

Title Of Each Class	Name Of Each Exchange On Which Registered
COMMON STOCK, PAR VALUE $.001 PER SHARE	**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 Exchange 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. Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☒

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

As of June 30, 2009 (the last business day of the Registrant's most recently completed second fiscal quarter), the aggregate market value of the Common Stock of the Registrant (based upon the closing price of the Common Stock at that date as reported by The Nasdaq Stock Market), excluding outstanding shares beneficially owned by directors and executive officers, was $17,168,000.

As of March 10, 2010, 10,630,512 shares of Common Stock of the Registrant were outstanding.

Part III of this Annual Report on Form 10-K incorporates by reference information (to the extent specific sections are referred to herein) from the Registrant's definitive Proxy Statement for its 2010 Annual Meeting of Stockholders to be held May 19, 2010 (the "2010 Proxy Statement").

Form 10-K

For the fiscal year ended December 31, 2009

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PART I

This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. For this purpose, any statements contained in this Annual Report on Form 10-K that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, words such as "may," "will," "expect," "believe," "anticipate," "estimate" or "continue" or comparable terminology are intended to identify forward-looking statements. These statements by their nature involve substantial risks and uncertainties, and actual results may differ materially depending on a variety of factors, including those set forth under Item 1A below. We undertake no obligation to correct or update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any future disclosures we may make on related subjects in future filings with the Securities and Exchange Commission. References in this Annual Report on Form 10-K to "Aetrium," "the company," "we" and "our," unless the context otherwise requires, refer to Aetrium Incorporated and its consolidated subsidiary and their respective predecessors.

ITEM 1. BUSINESS.

Overview

We design, manufacture and market a variety of electromechanical equipment used in the handling and testing of integrated circuits, or ICs, which constitute the highest revenue component of the semiconductor industry. Our primary focus is on high volume ICs and on the latest IC package designs. Our products are purchased primarily by semiconductor manufacturers and their assembly and test subcontractors. Our products are used in the test, assembly and packaging, or TAP, segment of semiconductor manufacturing. Our products automate critical functions to improve manufacturing yield, raise quality levels, increase product reliability and reduce manufacturing costs.

We have two principal equipment product lines:

- ***Test Handler Products***. In terms of revenue, this is our largest product line. Our broad line of test handler products incorporates thermal conditioning, contacting and automated handling technologies to provide automated handling of ICs during production test cycles. We also offer change kits to adapt our test handlers to different IC package configurations or to upgrade installed equipment for enhanced performance. Change kits can represent a significant part of our revenue.

- ***Reliability Test Equipment***. The primary focus of our reliability test equipment is to provide semiconductor manufacturers with structural performance data to aid in the evaluation and improvement of IC designs and manufacturing processes to increase IC yield and reliability.

Test handler products accounted for 48% and 59% of our net sales in 2009 and 2008, respectively. Reliability test equipment accounted for 17% and 15% of our net sales in 2009 and 2008, respectively. Change kits and spare parts accounted for 35% and 26% of our net sales in 2009 and 2008, respectively.

IC unit sales began to decline in late 2007 and continued to decline into 2008, but resumed growth by the end of the first quarter of 2008 and by early third quarter exceeded the 2007 peak. However, the worldwide financial collapse that became apparent by the end of the third quarter in 2008 resulted in one of the steepest declines ever in the semiconductor industry. Semiconductor companies in our primary industry segments reported revenue declines of over 25% from third quarter to fourth quarter 2008. Bookings in the TAP segment of the semiconductor equipment industry began declining by the end of the second quarter of 2008, and as a result of the worldwide financial collapse declined precipitously in the fourth quarter. According to SEMI, a semiconductor equipment industry trade association, revenues for test related equipment finished 2008 approximately 32% below 2007 revenues.

The steep semiconductor industry decline continued into 2009, and the industry posted its biggest percentage declines of IC units ever in the fourth quarter of 2008 and the first quarter of 2009. Notwithstanding continuation of the worldwide financial crisis, and undoubtedly due in part to the semiconductor industry's quick and dramatic action to reduce production as the financial crisis began, by second quarter of 2009 the industry began to recover some of its lost ground. In fact the second and third quarters of 2009 were the biggest percentage increases of IC units ever. However, by the end of 2009 the industry had not yet returned to peak unit production levels of 2008. As a result, the TAP segment of the semiconductor equipment industry continued its decline throughout 2009. According to SEMI, revenues for test related equipment in 2009 were almost 70% below 2007 revenues.

Our performance closely followed our industry segment. As a result of the worldwide financial crisis, our 2009 revenues were also almost 70% below our 2007 revenues.

Analysts of the semiconductor industry are forecasting a continuing recovery of IC units in 2010, and significant growth in the semiconductor equipment industry after two years of declines. We believe that our line of product offerings, including our newest product introductions, coupled with our lean cost structure and our strong working capital base, places us in a strong position to outperform our industry segment as conditions improve.

Our strategy has focused on revenue growth through product line expansion, by both internally developing and acquiring complementary technologies, businesses or product lines. Technologies, businesses and product lines that we have acquired in the past pursuant to this strategy have since been assimilated and consolidated into our current operations.

We were incorporated in Minnesota in December 1982. Our executive offices are located at 2350 Helen Street, North St. Paul, Minnesota 55109. Our telephone number is (651) 770-2000. Our website address is *www.aetrium.com*. We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to those reports, as soon as is reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. Our website is not intended to be a part of, nor are we incorporating it by reference into, this Annual Report on Form 10-K.

Test Handler Products

Test handlers are electromechanical systems interfaced with a tester to form a test system designed to handle, thermally condition, contact and sort ICs automatically during the final test stage of the manufacturing process. ICs are loaded into the test handler from bowls, tubes or trays and then, if required, transported to a temperature chamber within the test handler where they are thermally conditioned to the required testing temperature. The ICs are then inserted into a contactor, which provides an electrical connection between the IC and the tester. After testing, the test handler sorts the ICs according to test performance as provided by the tester. In some cases, additional process steps are completed by the test handler system. These include marking or inspection of the IC packages, and automatic placement of the ICs into a tube, tray or tape for shipment to the end user. Test handlers must meet industry criteria for thermal conditioning, contactor integrity and minimization of damage to the IC during the test handling cycle.

ICs are multi-function semiconductor devices that may contain millions of individual transistors, and include microprocessors, microcontrollers, digital signal processors and memory devices. ICs come in a wide range of sizes and package types, depending upon their application.

In the testing of ICs, the device package type being tested often dictates the type of test handler used. Small outline packages, or SOPs, constituting the largest IC package segment, have leads, or electrical contacts, extending from two sides and are typically tested with gravity feed test handlers. Micro leadless packages, or MLPs (and sometimes referred to as DFNs or QFNs), have electrical contact pads flush with the sides and bottoms of the ICs. MLPs are typically tested with gravity feed test handlers, particularly for analog and linear applications, but may also be tested with turret based or pick-and-place test handlers. MLPs constitute one of the fastest growing new IC package types.

More complex ICs are sometimes packaged in IC package families with leads more easily damaged in handling. These package families are typically tested with pick-and-place test handlers.

Our primary focus continues to be on the newest device and package types, and the largest volume and fastest growing markets, in the IC side of the semiconductor industry. Our test handler products are complementary with minimal overlap of application, and we distribute and service them through a common organization for efficiency. Our current test handler product lines are all gravity feed test handlers.

Gravity Feed Test Handlers

Traditionally, test handlers have used gravity to move ICs from tubes or trays through the handler system and back into tubes or trays. Typically, in gravity feed systems ICs are halted at necessary points in the handling process by stopping against other ICs or singulation mechanisms, which can result in lead damage to IC packages with more fragile leads. Accordingly, gravity feed handlers are best suited for leadless packages and IC packages with more rugged leads, which include MLPs and most SOPs.

Our gravity feed test handlers compete most favorably in high-volume applications and their high throughput rates are an added advantage in relatively short test time applications. These handlers adapt to third party contactors, as well as our internally developed proprietary contactors, providing cost-effective solutions to a wide range of customer test requirements. Our gravity feed test handlers can heat or cool the ICs being tested to test temperatures ranging from -55 degrees Celsius to +155 degrees Celsius. They use mechanical refrigeration to cool ICs, which is more economical and less dangerous than liquid nitrogen, commonly used as a refrigerant in competing handlers.

Our 55V Series is our principal and newest line of gravity feed test handlers. The 55V Series focuses on analog and logic IC applications and addresses a wide range of IC packages, including SOPs and MLPs. The 55V Series offers a small footprint, a vertical backplane that can accommodate nearly any size of test head, and our high speed test site actuator that we believe offers significant throughput advantages over our competition, depending upon device test times and thermal conditioning requirements. We offer the 55V Series in single, dual, quad and eight test site configurations. Each of our 55V Series multi-site test handlers can simultaneously test devices in each of their sites to increase productivity and reduce testing costs in certain applications.

We first introduced our 55V6 single and dual site test handler in 2002 and our 55V8 quad site test handler in 2004. We began volume production of our 55V16 eight site test handler in 2007, and since then we have expanded evaluations of our 55V series of test handlers to additional potential new customers.

Change Kits and Spare Parts

We have an ongoing demand for IC package change kits for our installed test handler products, including test handlers no longer in our active product lines. Change kits consist of the parts necessary to reconfigure a test handler for another type or size of device package. We sell a variety of change kits to accommodate the growing variety of device packages used in the semiconductor industry. The demand for change kits is primarily driven by the introduction of new IC package types and increased production volumes experienced by our end customers. We sell spare parts with new equipment orders as kits or separately as piece parts or in kit form as required.

Reliability Test Equipment

The IC industry's demand for higher performance devices through smaller circuit geometries has led to significant technological changes in the materials and processes used to manufacture ICs, including a continuing migration to copper materials for the increasingly minute circuitry of devices. These changes in technology, along with IC user demand for increased reliability, have created a need for increasingly sophisticated reliability testing of IC designs and manufacturing processes. Our reliability test equipment product line enables IC manufacturers to force and measure precise levels of voltage and current through structures designed to exemplify IC failure modes, collect and analyze relevant data, and predict lifetime performance of ICs. This equipment can be utilized to perform reliability testing of packaged and wafer level test structures.

In 1998, we introduced our 1164 Series of reliability test equipment, including a suite of applications for customers to perform a variety of tests. We have since added many new features, including the full reliability test functionality necessary for testing an IC manufacturer's entire copper process. The 1164 Series features a modular design that allows for great flexibility in performing reliability tests, and can test up to 4,096 devices at a time and perform numerous simultaneous tests on batches of ICs. Eight of the top 10 semiconductor manufacturers in the world are using our 1164 Series of reliability test equipment for copper and related advanced process technologies.

Competition

The semiconductor capital equipment market is highly competitive. In the market for test handler products, we compete with a number of companies ranging from very small businesses to large companies, some of which have substantially greater financial, manufacturing, marketing and product development resources than we have. Some of these companies manufacture and sell both testers and test handlers. The particular companies with which we compete vary with our different test handler product lines, with no one company dominating the overall test handler market. The companies with which we compete most directly in the test handler market include Multitest Electronic Systems GmbH (a Dover Corporation company), Rasco (a division of Cohu, Inc.) and TESEC Corporation.

We compete for test handler sales primarily on the basis of effective handler throughput, cost of ownership, temperature accuracy and other performance characteristics of our products, the breadth of our product lines, the effectiveness of our sales and distribution channels, the effectiveness of our post-sale support and our customer relationships. We believe we compete favorably on all of these factors.

The market for our reliability test equipment is also highly competitive and our competitors include QualiTau, Ltd., Chiron Technology Pte. Ltd., ESPEC Corp. and Reedholm Instruments Co. We compete for reliability test system sales on the basis of technology, price, delivery, system flexibility and overall system performance. We believe we compete favorably on all of these factors.

Manufacturing and Supplies

Our manufacturing operations consist of procurement and inspection of components and subassemblies, assembly and extensive testing of finished products.

We emphasize quality and reliability in both the design and manufacture of our products. We or our suppliers inspect all components and subassemblies for mechanical and electrical compliance to our specifications. We test all finished products against our specifications, and customer specifications where applicable, and fully assembled test handler products are tested at all temperatures for which they are designed and with all the IC packages to be accommodated.

A significant portion of the components and subassemblies used in our products, including machined parts, printed circuit boards, refrigeration systems, vacuum pumps and contactor elements, are manufactured by third parties on a subcontract basis. As a part of our total quality management program, we have an ongoing supplier quality program under which we select, monitor and rate our suppliers, and recognize suppliers for outstanding performance.

Certain components used in our products, including certain contactor components, printed circuit boards and refrigeration systems, are currently available from only a limited number of sources. We do not maintain long-term supply agreements with most of our suppliers, and we purchase most of our components through individual purchase orders. We may not always be able to replace all of our suppliers within a time period consistent with our business requirements. We attempt to keep an adequate supply of critical components in our inventory to minimize any significant impact the loss of a supplier may cause.

Customers

We rely on a limited number of customers for a substantial percentage of our net sales. In 2009, our top two customers accounted for 58% and 20% of our net sales, respectively. In 2008, our top three customers accounted for 40%, 25% and 11% of our net sales, respectively. The loss of or a significant reduction in orders by these or other significant customers, including reductions due to market, economic or competitive conditions in the semiconductor industry, would likely have a negative impact on our financial condition and results of operations.

Sales and Marketing

We market our products through a combination of direct salespeople, independent sales representatives and international distributors. Our direct sales organization, comprised of five salespeople, is responsible for most domestic sales, and coordinates the activities of our independent sales representatives and international distributors and actively participates with them in selling efforts. This enables us to establish strong direct ties with our customers.

We maintain sales and service locations in North St. Paul, Minnesota, Morgan Hills, California, and Kuala Lumpur and Penang, Malaysia. As of December 31, 2009, we had domestic independent sales representatives located in New Hampshire and California, and international independent sales representatives or distributors located in the United Kingdom, France, Germany, Italy, Korea, Japan, Taiwan, China, Thailand, Malaysia, Singapore and the Philippines.

Our marketing efforts include participation in industry trade shows and production of product literature and sales support tools. These efforts are designed to generate sales leads for our domestic independent sales representatives, international distributors and direct salespeople.

International shipments accounted for 78% and 85% of our net sales in 2009 and 2008, respectively. In addition, it is not uncommon for U.S. customers to take delivery of products in the United States for subsequent shipment to international sites. Most of our international shipments are made to international sites of U.S. semiconductor manufacturers, although there is a growing foreign customer base included in our international sales.

We invoice all of our international sales in U.S. dollars and, accordingly, have not historically been subject to fluctuating currency exchange rates. We establish credit limits, if appropriate, on our international distributors, who purchase products from us and resell to end-users. We may also require irrevocable letters of credit from our end-user international customers to minimize credit risk and to simplify the purchasing/payment cycle.

Research and Development

We believe we must continue to enhance, broaden and modify our existing product lines to meet the constantly evolving needs of the semiconductor equipment market. To date, we have relied both on internal development and acquisitions of technology and product lines to extend our product lines, increase our customer base and avoid reliance on any single semiconductor equipment market segment. We focus our new product development efforts on what we believe to be the most compelling requirements in the largest and fastest growing segments of the IC side of the semiconductor industry, with emphasis on near term revenue potential.

Product development expenses include new product development and continuation engineering. Our continuation engineering efforts include the development of additional change kits to meet the expanding families of IC package types, further advancement of contactor technologies, and the addition of features and performance options for existing equipment.

We expense all research and development costs, including costs for software development, as incurred. In 2009 and 2008, our expenses relating to research and development were approximately $2.2 million and $3.0 million, respectively, or 25.4% and 17.5% of our net sales, respectively. Over time, our objective is to invest approximately 12% to 15% of our net sales in research and development. However, the percentage may be higher in periods of reduced sales such as 2009 and 2008.

Intellectual Property

We attempt to protect the proprietary aspects of our products with patents, copyrights, trade secret law and internal nondisclosure safeguards. We currently hold several U.S. patents ranging in remaining terms from one to seven years covering certain features of our handling systems and reliability test systems, the contactor elements incorporated in certain of our test handlers, and elements of our proprietary conductive thermal technology. The source code for the software contained in our products is considered proprietary, and we typically do not furnish source code to our customers. We have also entered into confidentiality agreements with our employees. Despite these restrictions, it may be possible for competitors or users to copy aspects of our products or to obtain information that we regard as a trade secret.

There is a rapid pace of technological change in the semiconductor industry, which in turn compels us to continually enhance and extend our product lines. We believe that patent, trade secret and copyright protection is less significant to our competitive position than factors such as the knowledge, ability and experience of our personnel, new product development, frequent product enhancements, name recognition and ongoing, reliable product maintenance and support.

Employees

As of December 31, 2009, we had 67 employees, one of whom was part-time. They consisted of 28 in manufacturing, 16 in engineering and product development, 15 in sales, marketing and customer service, and 8 in general administration and finance. None of our employees are represented by a labor union or are subject to any collective bargaining agreement. We have never experienced a work stoppage, and we believe that our employee relations are satisfactory.

ITEM 1A. RISK FACTORS.

Several important risks and uncertainties exist that could have an impact on our future operating results. These factors could cause our actual results to differ materially from our anticipated results or results that are reflected in any forward-looking statements in this Annual Report on Form 10-K. These factors, and their impact on the success of our operations and our ability to achieve our goals, include the following:

Market Fluctuations in the Semiconductor Industry

Our business and results of operations depend upon capital expenditures by manufacturers of ICs. As a result, our operating results are materially dependent upon economic and business conditions in the semiconductor industry. This industry has been subject to significant market fluctuations and has experienced periodic downturns, which often have had a disproportionate effect on capital equipment suppliers, such as Aetrium. In periods of excess capacity, the semiconductor industry sharply reduces purchases of capital equipment, such as our products. The worldwide financial collapse that became apparent by the end of the third quarter of 2008 has resulted in an unprecedented downturn in the semiconductor industry and in the semiconductor equipment industry. While there are currently indications of improving conditions in the semiconductor industry, there can be no assurance that this trend will continue and result in self-sustaining levels of revenues for the Company.

Successful Development and Introduction of New Products and Product Improvements

We operate in an industry that is highly competitive with respect to timely product innovations. The market for our products is characterized by rapid technological change and evolving industry standards. The development of more complex ICs has driven the need for new equipment and processes to produce such devices at an acceptable cost. We believe that our future success will depend in part upon our ability to anticipate and respond rapidly to changes in technologies, IC package types, market trends and industry standards. If we cannot successfully develop and introduce new and enhanced cost-effective products on a timely basis that are accepted in the marketplace, our business and operating results will likely suffer.

Reliance on Significant Customers

We rely on a limited number of customers for a substantial percentage of our net sales. A reduction, delay or cancellation of orders from one or more of these significant customers, or the loss of one or more of these customers, would likely have a negative impact on our operating results.

Impact of Competitive Markets

The markets for our main product lines are highly competitive. Some of our competitors have substantially greater financial, manufacturing, marketing and product development resources than we have. For most of our customers, we are not the sole supplier of our type of equipment. In addition, it is common for customers to evaluate more than one supplier's equipment for their emerging requirements. Accordingly, we are at significant risk to lose orders to competing suppliers, and even to being displaced as a supplier to potentially significant customers, which would likely have a negative impact on our operating results.

Fixed Cost Constraints on Reduction of Expenses

Many of our expenses, particularly those relating to properties, capital equipment and certain manufacturing overhead items, are fixed in the short term. Reduced demand for our products and services causes our fixed production costs to be allocated across reduced production volumes, which negatively affects our gross margins and profitability. Our ability to reduce expenses is further constrained because we must continue to invest in research and development to maintain our competitive position and to maintain service and support for our existing customer base. Accordingly, in the event of a reduction in our revenues, resulting from an industry downturn as occurred in 2009 or otherwise, we may not be able to maintain profitable operations.

Impact of Cost Reduction Actions

In the face of the sustained downturn in our industry that began in late 2008 and continued throughout 2009 we implemented cost reduction actions, including workforce reductions, pay freezes and reductions, and reductions in other expenditures. In doing so, we believe we have maintained the necessary infrastructures to allow us to take full advantage of subsequent improvements in conditions. However, there can be no assurance that reductions we have made or may make in personnel and expenditure levels and the loss of the capabilities of personnel we have terminated or may terminate will not inhibit us in the timely completion of product development efforts, the effective service of and responsiveness to customer requirements, and the timely ramp up of production in response to improving market conditions.

Risk Potential of Future Acquisitions

We have in the past and may in the future pursue acquisitions of complementary technologies, product lines or businesses. In addition to the risks associated with any such business that may be acquired, future acquisitions may result in potentially dilutive issuances of equity securities, the use of our cash or incurrence of debt that may reduce our ability to meet future capital expenditure and working capital requirements, the incurrence of amortization expense and/or valuation adjustments associated with goodwill and intangible assets that would reduce our profitability, difficulties in the assimilation of the operations and products of the acquired business, and diversion of management's attention from other business concerns.

Reduction in the Sales Efforts by our Current Distributors

We market and sell our test handlers and reliability test products outside of the United States primarily through international distributors that are not under our direct control. We have limited internal sales personnel. A reduction in the sales efforts by our current distributors, or the termination of one or more of these relationships with us, could negatively affect our operating results.

Risks Inherent in our International Sales

We expect that international sales will continue to account for a significant portion of our net sales. As a result, our operations are subject to a number of risks inherent in conducting business internationally, which if any of them develops could negatively impact our operating results.

Supply of Significant Components for our Products

Certain significant components used in our products, including certain contactor components, printed circuit boards and refrigeration systems, are currently available only from sole or limited sources. We do not maintain long-term supply agreements with most of our suppliers, and we purchase most of our components through individual purchase orders. Our inability to obtain components in required quantities or of acceptable quality could result in delays or reductions in our product introductions or shipments, which could damage our relationships with our customers and cause our operating results to suffer.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

We conduct our corporate functions and manufacturing, product development, sales, marketing and field service activities in North St. Paul, Minnesota. We currently occupy approximately 45,000 square feet in North St. Paul under a lease that expires in February 2011, at which time we have an option to extend the lease for an additional five-year term. We consider our present facilities to be sufficient for our current operations.

In addition, as of December 31, 2009, we leased a 45,000 square foot facility in Poway, California, which we vacated in 2000. This lease expired in January 2010. The facility was subleased to two independent parties with the sublease terms running concurrently with our remaining lease term. We remained liable under the lease on a contingent basis in the event of a subtenant default. During fiscal year 2009, one of the subtenants was in default under its sublease agreement with us for non-payment of rents. In September 2009, we filed a legal action against the subtenant in the State of California to recover amounts owed to us. We recorded a charge of $318,000 in the fourth quarter of 2009 to fully reserve amounts due from this subtenant through December 31, 2009. In addition, we recorded a charge of $54,000 for the unpaid January 2010 rent and related costs we expect to incur.

In late March 2010, we reached an accord with the delinquent subtenant under which we agreed to settle our claim for a cash payment of $175,000 if received by April 21, 2010. If we do not receive the cash payment by that date, under the terms of the accord we will be awarded a default judgment against the subtenant in the amount of approximately $423,000. We have no assurance that the subtenant will make the agreed upon cash payment or that we would be able to collect any amount on a default judgment if awarded.

ITEM 3. LEGAL PROCEEDINGS.

We are not a party to, and none of our property is the subject of, any material pending legal, governmental, administrative or other proceedings.

ITEM 4. RESERVED

ITEM 4A. EXECUTIVE OFFICERS OF THE REGISTRANT.

Our executive officers, their ages and the offices they held as of March 3, 2010 are as follows:

Name	Age	Position
Joseph C. Levesque	65	Chairman of the Board and Chief Executive Officer
John J. Pollock	50	President and Director
Douglas L. Hemer	63	Chief Administrative Officer, Secretary and Director
Daniel M. Koch	56	Vice President — Worldwide Sales
Paul H. Askegaard	58	Treasurer
Timothy G. Foley	50	Vice President — Manufacturing
Dean K. Hedstrom	60	Vice President — Technology
Timothy A. McMullen	42	Vice President — Reliability Test Systems
W. Charles Sletten, II	58	Vice President — Engineering

Mr. Levesque has served as our chief executive officer and chairman of our board since 1986. From 1986 until October 2009, Mr. Levesque also served as our president. From 1973 to 1986, Mr. Levesque served in various capacities and most recently as executive vice president of Micro Component Technology, Inc., a manufacturer of IC testers and test handlers.

Mr. Pollock was elected as one of our directors in March 2010 and has served as our president since October 2009. From December 2001 to October 2009, Mr. Pollock served as vice president and general manager of our North St. Paul operations. From August 1998 to December 2001, Mr. Pollock served as our vice president of product development and marketing. From April 1998 to August 1998, Mr. Pollock served as interim general manager of our North St. Paul operations. From November 1997 to May 1998, Mr. Pollock served as interim general manager of a test handler product line we had recently acquired. From September 1996 to August 1997, Mr. Pollock served as a business unit manager.

Mr. Hemer has served as one of our directors since 1986, and has served as our secretary since May 2000 and as our chief administrative officer since March 2001. He served as our group vice president from August 1998 to March 2001, as the president of our former Poway, California operations from February 1997 to August 1998 and as our chief administrative officer from May 1996 until February 1997. Mr. Hemer was a partner in the law firm of Oppenheimer Wolff & Donnelly LLP for more than 15 years before joining Aetrium in May 1996. Mr. Hemer is also a director of Versa Companies, a privately held company.

Mr. Koch has served as our vice president - worldwide sales since March 1991. From March 1990 to March 1991, Mr. Koch served as the vice president of sales of Summation, Inc., a company involved with the testing of PC boards. From December 1973 to March 1990, Mr. Koch served in various sales positions and most recently as vice president of sales of Micro Component Technology, Inc.

Mr. Askegaard has served as our treasurer since February 1992. From October 1986 to February 1992, Mr. Askegaard served as our corporate controller.

Mr. Foley has served as our vice president – manufacturing of our North St. Paul operations since December 2001. Prior to that, he served at our North St. Paul operations as vice president – operations from August 1998 to December 2001, vice president – manufacturing from October 1996 to August 1998, and in various other positions since joining us in 1988.

Mr. Hedstrom has served as our vice president – technology since June 2007. Prior to that, he served as the vice president – engineering of our North St. Paul operations since joining us in September 2004. From 1993 to 1998 Mr. Hedstrom was a co-founder, director, and later president of CariTech, Inc., a manufacturer of carrier tape materials for the IC industry. Following the acquisition of CariTech by Illinois Tool Works in August 1998, he served as engineering manager – worldwide operations for Illinois Tool Works until May 2001. Prior to founding CariTech and subsequent to his retirement from Illinois Tool Works, Mr. Hedstrom served as president and a principal of Hedstrom Engineering Co., a consulting firm specializing in industrial automation and controls.

Mr. McMullen has served as our vice president – reliability test systems since April 2007. Prior to that, he served at our North St. Paul operations as vice president – marketing/applications from February 2002 until April 2007, as product director of our reliability test equipment from March 2000 until February 2002, and as an electrical engineer since joining us in 1994.

Mr. Sletten has served as our vice president – engineering since joining us in January 2008. Prior to that, he served as president of EnergyFlo Corporation from 2003 to 2007, as vice president, general manager of Goodall Mfg. LLC from 2002 to 2003, and in various capacities including chief engineer, vice president and senior vice president at Nilfisk-Advance from 1984 to 2001.

PART II

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

Market Information

Our common stock is quoted on The Nasdaq Global Market under the symbol "ATRM." The following table summarizes the high and low closing sale prices per share of our common stock for the periods indicated, as reported on The Nasdaq Global Market. These prices do not include adjustments for retail mark-ups, markdowns or commissions.

		First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Fiscal 2009	High	$ 1.93	$ 1.75	$ 2.65	$ 2.99
	Low	$ 0.91	$ 0.99	$ 1.37	$ 2.05
Fiscal 2008	High	$ 5.92	$ 4.23	$ 3.75	$ 2.82
	Low	$ 3.64	$ 2.98	$ 2.61	$ 1.01

Holders

As of March 10, 2010, there were 125 shareholders of record. We estimate that an additional 2,900 shareholders beneficially own stock held for their accounts at brokerage firms and financial institutions.

Dividends

We have never paid cash dividends on our common stock. We currently intend to retain any earnings for use in our operations and do not anticipate paying cash dividends in the foreseeable future.

Recent Sale of Unregistered Securities

We did not have any unregistered sales of equity securities during fiscal year 2009.

Issuer's Purchases of Equity Securities

We did not make any purchases of our common stock during the fourth quarter of fiscal 2009.

ITEM 6. SELECTED FINANCIAL DATA

As a Smaller Reporting Company as defined by Rule 12b-2 of the Exchange Act and in Item 10(f)(1) of Regulation S-K, we are electing scaled disclosure reporting obligations and therefore are not required to provide the information requested by this Item.

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

Overview:

Aetrium designs, manufactures and markets a variety of electromechanical equipment used in the handling and testing of integrated circuits, or ICs, which constitute the highest revenue component of the semiconductor industry. Our primary focus is on high volume ICs, the latest IC package designs, and the latest IC manufacturing processes. Our test handler products are purchased primarily by semiconductor manufacturers and their assembly and test subcontractors and are used in the test, assembly and packaging, or TAP, segment of semiconductor manufacturing. Our reliability test products are used to validate IC designs and monitor semiconductor wafer fabrication processes. Our products automate critical functions to improve manufacturing yield, raise quality levels, increase product reliability and reduce manufacturing costs.

As an equipment supplier to the semiconductor industry, Aetrium's results are driven primarily by worldwide demand for ICs, which in turn depends on end-user demand for electronic products. The demand for our products can fluctuate significantly from period to period due to the direct or indirect impact of numerous factors, including but not limited to changes in the supply and demand for ICs, changes in IC manufacturing capacity, advancements in industry technologies, changes in U.S. and worldwide economic conditions and competitive factors.

Like many suppliers in the TAP segment of the semiconductor equipment industry, Aetrium's business was severely impacted in fiscal years 2008 and 2009 by the global recession and turmoil in the financial credit markets which have contributed to significant decreases in the sales of electronic products and the demand for ICs and IC manufacturing equipment.

Business conditions in the semiconductor equipment industry were generally weak in the first half of 2008 and deteriorated significantly in the second half of the year as the worldwide economic crisis evolved. Aetrium's results generally followed this trend as net sales amounted to $14.3 million in the first nine months of 2008 and fell to $2.9 million in the fourth quarter as many IC manufacturers, including our primary customers, made significant adjustments to their operations and reduced their capital expenditure plans in anticipation of significantly declining demand for ICs. In the fourth quarter of 2008, as it became clear to us that business conditions may be weak for an extended period of time, we immediately took steps to reduce our expenses. We eliminated contract workers, terminated twelve employees, or 15% of our regular workforce, and reduced other operating expenses as well. In January 2009 we implemented wage reductions of 10% for all employees and up to 25% for our executive officers. Our fiscal year 2008 sales totaled $17.2 million compared with $28.0 million in 2007, a decrease of 38%.

As expected, weak economic conditions and the semiconductor equipment industry slowdown continued into fiscal year 2009 and Aetrium's operating results continued to be adversely impacted. We experienced declining net sales and increasing losses in the first two quarters of 2009. General economic and industry conditions began to improve in mid-year and we began to see signs of increased demand for our customers' products and generally improving equipment utilization rates. Our net sales almost doubled to $5.7 million in the second half of 2009 compared with $2.9 million in the first half of the year. Despite an improvement in business conditions late in the year, our net sales for fiscal year 2009 declined further to $8.6 million compared with $17.2 million in 2008, a decrease of 50%.

We believe fiscal year 2010 will be a turn-around year for the semiconductor equipment industry and for Aetrium. Recently, we have continued to see signs that economic and semiconductor industry business conditions are improving. We have experienced significant increases in sales quotations and requests for quick deliveries from our customers. We have responded to these positive trends by making adjustments to our operations to prepare for increased production and shipment levels. It appears that new orders and net sales for Aetrium will increase significantly in the first quarter of 2010 compared with the fourth quarter of 2009. However, there can be no assurance the positive momentum we see in early 2010 will continue or that changes in semiconductor industry conditions, general domestic and global economic conditions, and/or other factors will not adversely impact Aetrium's future operating results.

Off-Balance Sheet Arrangements:

We did not have any off-balance sheet arrangements as of December 31, 2009 or 2008.

Critical Accounting Policies and Estimates:

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the critical accounting policies that require the most significant judgments and estimates used in the preparation of our consolidated financial statements are those related to share-based compensation, revenue recognition, accounts receivable, inventories, warranty obligations and income taxes.

Share-Based Compensation

We account for share-based compensation in accordance with the provisions of Accounting Standards Codification (ASC) 718, "Compensation – Stock Compensation," which requires the measurement and recognition of all share-based compensation using the fair value method.

We determine the fair value of share-based awards on the grant date by using the Black-Scholes option valuation model. We also use the Black-Scholes model to determine the fair value of modifications to awards by determining and comparing the fair value of the modified award with the fair value of the award immediately before the modification. Option valuation models, including Black-Scholes, require the input of subjective assumptions, and changes in the assumptions used can materially affect the calculation of the fair value of an award. These assumptions include expected stock price volatility, risk-free interest rate, expected dividend yield, and the expected life of the award. We estimate future stock price volatility based primarily on historical daily stock price observations of our common stock. Risk-free interest rate is estimated based on U.S. Treasury bill rates consistent with the expected term of an award. We assume an expected dividend yield of zero based on our intention to retain any future earnings for use in our operations. Expected life of an award is estimated primarily based on vesting provisions, the contractual term of the award, and historical experience of previous awards with similar terms or, for situations in which historical experience is not available or is deemed unreliable, we use the simplified method for estimating the expected life of an award, as permitted by ASC 718. ASC 718 also requires that estimated forfeitures be considered in the calculation of future compensation expense at the date of grant. We use historical data, as adjusted if deemed appropriate, to estimate future option forfeiture rates for purposes of recognizing share-based compensation expense.

Revenue Recognition

We recognize revenue on product sales when there is persuasive evidence of an arrangement, the sales price is fixed or determinable, title and risk of loss have passed to the customer, contractual obligations have been substantially met, and collection of the related receivable is reasonably assured. Revenue on spare parts and change kits is generally recognized upon shipment. In some circumstances, revenue on equipment sales is recognized subsequent to shipment. For example, equipment sales contracts may specify that customer acceptance criteria be met. In such cases, revenue for established equipment products that have previously met a customer's acceptance criteria is generally recognized upon shipment, provided the equipment meets our final test requirements that we believe substantially demonstrates conformance to the customer's acceptance criteria. However, revenue for equipment products that are newly designed or otherwise lack a reliable history of customer acceptance is deferred until objective evidence of customer acceptance has been obtained. In situations where equipment contracts include significant post-shipment obligations to be performed by us, revenue for the entire transaction is deferred until such obligations have been completed or, if applicable, the transaction is accounted for as a multiple-element arrangement. For arrangements containing multiple elements, the amounts allocated to delivered and undelivered elements are based on their fair value and revenue is recognized upon delivery of each element. Due to the high selling prices of certain types of equipment, the timing of revenue recognition of a relatively small number of transactions may have a significant impact on our reported operating results.

Accounts Receivable

We maintain an allowance for doubtful accounts that reflects our estimate of losses that may result from the uncollectability of accounts receivable. Our allowance for doubtful accounts is based primarily on an analysis of individual accounts for which we have information indicating the customer may not be able to pay amounts owed to us. In these cases, based on the available facts and circumstances, we estimate the amount that will be collected from such customers. We also evaluate the collectability of our accounts receivable in the aggregate based on factors such as the aging of receivable amounts, customer concentrations, historical experience, and current economic trends and conditions. We adjust our allowance for doubtful accounts when additional information is received that impacts the amount reserved. If circumstances change, our estimates of the recoverability of accounts receivable could be reduced or increased by a material amount. Such a change in estimated recoverability would be accounted for in the period in which the facts that give rise to the change become known.

Inventories

We adjust our inventories for estimated excess and obsolete items by reducing their carrying values to estimated realizable value based upon assumptions about future product demand and market conditions. If actual product demand or market conditions are less favorable than those projected by management, additional inventory adjustments may be required.

Warranty Obligations

We accrue estimated warranty costs in the period that the related revenue is recognized. Our warranty cost estimates and warranty reserve requirements are determined based upon product performance, historical warranty experience and costs incurred in addressing product performance issues. Should product performance or cost factors differ from our estimates, adjustments to our warranty accrual may be required.

Income Taxes

We record income tax benefit (expense) based on our estimate of the effective tax rates for the jurisdictions in which we do business. We record the benefit we will derive in future accounting periods from tax losses and credits and deductible temporary differences as "deferred tax assets" which are included in the caption "Deferred income taxes" on our consolidated balance sheet. In accordance with ASC 740, "Income Taxes," if, based on all available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized, we record a valuation allowance to reduce the carrying value of our deferred tax assets to the estimated realizable amount. If the valuation allowance is increased, we record additional income tax expense in the period the valuation allowance is increased. If the valuation allowance is reduced, we record an income tax benefit. We make significant estimates and judgments in determining our income tax provision, deferred tax assets and valuation allowance recorded against our deferred tax assets. Actual results may differ from those reflected in management estimates and could result in adjustments that have a material impact on our results of operations.

Results of Operations:

Selected statement of operations data as a percentage of our net sales for 2009 and 2008 were as follows:

	2009	2008
Net sales	**100.0%**	100.0%
Cost of goods sold	**63.9**	52.0
Gross profit	**36.1**	48.0
Operating expenses:		
Selling, general and administrative	**59.8**	37.9
Research and development	**25.4**	17.5
Total operating expenses	**85.2**	55.4
Loss from operations	**(49.1)%**	(7.4)%

Net Sales:

Our net sales by product line as a percentage of total sales for 2009 and 2008 were as follows:

	2009	2008
Test handler products	**48%**	59%
Reliability test equipment products	**17**	15
Change kits and spare parts	**35**	26
Total	**100%**	100%

Net sales were $8.6 million in 2009 compared with $17.2 million in 2008, a 50% decrease. Net sales in 2009 decreased across all our product lines as a result of the weak economic conditions and semiconductor equipment industry slowdown that began in 2008 and continued into 2009. During this period, worldwide demand for semiconductors decreased substantially, resulting in excess manufacturing capacity and sharply reduced demand for equipment like ours. Net sales of test handlers were $4.1 million in 2009 compared with $10.2 million in 2008, a decrease of 59%. Net sales of reliability test equipment were $1.5 million in 2009 compared with $2.5 million in 2008, a decrease of 43%. Net sales of change kits and spare parts were $3.1 million in 2009 compared with $4.5 million in 2008, a decrease of 32%. Sales of change kits and spare parts were less impacted by the industry downturn as some customers continued to purchase these items to optimize the utilization of existing equipment rather than purchase new equipment.

Gross Profit:

Aetrium's gross profit as a percentage of net sales can fluctuate based on a number of factors, including but not limited to the mix of products sold, distribution channel mix, price discounting, product maturity, inventory writedowns, and the utilization of manufacturing capacity associated with varying production levels. Gross profit was 36.1% of net sales in 2009 compared with 48.0% in 2008. Our gross margin decreased in 2009 substantially due to inefficiencies associated with significantly lower production and net sales levels. In addition, we recorded an inventory obsolescence charge of $0.2 million in 2009 as we determined that the realizable value of inventories for certain of our older products had diminished. The gross margin decrease in 2009 resulting from the above factors was partially offset by a more favorable product and distribution mix. Test handler sales, which are generally lower margin sales than our other product lines, represented 48% of total net sales in 2009 compared with 59% in 2008. Reliability test equipment sales represented 17% of total net sales in 2009 compared with 15% of net sales in 2008 and sales of change kits and spare parts represented 35% of net sales in 2009 compared with 26% in 2008. Discounted sales to distributors represented 26% of total net sales in 2009 compared with 54% in 2008.

Selling, General and Administrative Expenses:

Selling, general and administrative, or SG&A, expenses consist primarily of employee compensation and related costs, independent representative commissions, travel, warranty and no-charge equipment improvement costs. SG&A expenses were $5.2 million in 2009 compared with $6.5 million in 2008, a decrease of 21%. Compensation costs decreased $0.8 million in 2009 primarily due to a workforce reduction implemented in December 2008, wage reductions for all employees implemented in January 2009 and the elimination of all profit-related incentives. Commissions expense, warranty expense, no-charge equipment improvements and travel costs decreased $0.1 million, $0.2 million, $0.1 million and $0.3 million, respectively, due primarily to lower sales and reduced sales and service activities. These decreases were partially offset by a $0.4 million charge recorded in 2009 to reserve for a loss on a sublease contract (see Note 9 to the consolidated financial statements).

Research and Development Expenses:

Research and development expenses were $2.2 million in 2009 compared with $3.0 million in 2008, a decrease of 27%. Compensation costs related to research and development decreased $0.4 million in 2009 primarily due to a workforce reduction implemented in December 2008, wage reductions for all employees implemented in January 2009 and the elimination of all profit-related incentives. Contract services decreased $0.2 million and travel expenses decreased $0.1 million due to cost containment efforts. Research and development expenses represented 25.4% of total net sales in 2009 compared with 17.5% of total net sales in 2008. New product development is an essential part of our strategy to gain market share. Over time, we expect to invest approximately 12% to 15% of our revenues in research and development although we may exceed this range in periods of reduced revenues as was the case in 2009 and 2008.

Interest Income, Net:

Interest income, net, amounted to $0.1 million and $0.3 million in 2009 and 2008, respectively. These amounts consisted primarily of interest income from the investment of excess funds. The decrease in interest income in 2009 reflects generally declining interest rates and lower average invested cash balances.

Income Tax Benefit (Expense):

We recorded income tax expense of $2.6 million in fiscal year 2009 which included a $1.5 million income tax benefit offset by a $4.1 million increase in the valuation allowance on our deferred tax assets. Excluding the valuation allowance adjustment, our effective tax rate was 35.1%. We recorded an income tax benefit of $0.3 million in fiscal year 2008, which reflected a 33.7% effective tax rate. See Note 12 to our consolidated financial statements for a full discussion of our income tax benefit (expense), valuation allowance and other income tax matters.

Financial Condition, Liquidity and Capital Resources:

Cash and cash equivalents decreased by approximately $2.2 million in the year ended December 31, 2009. We used $2.2 million of cash to fund operating activities, which included our net loss of $6.7 million, partially offset by $3.5 million of non-cash expenses and $1.0 million in working capital changes. Non-cash expenses included depreciation expense of $0.1 million, share-based compensation expense of $0.6 million, deferred income taxes of $2.6 million and an inventory obsolescence charge of $0.2 million. Working capital changes contributing to cash consisted primarily of a $1.5 million decrease in inventories, partially offset by a $0.6 million increase in accounts receivable. Inventories decreased primarily due to significantly reduced inventory purchases in 2009 compared with 2008 in response to lower sales levels. Accounts receivable increased primarily because shipments in the fourth quarter of 2009 were concentrated in the latter part of the period. Net cash flows from investing activities and financing activities were not significant in fiscal year 2009.

Cash and cash equivalents decreased by approximately $0.5 million in the year ended December 31, 2008. We used $0.4 million of cash to fund operating activities, which included our net loss of $0.6 million and working capital changes of $0.2 million, partially offset by $0.4 million of non-cash items. Non-cash items included depreciation expense of $0.1 million, share-based compensation expense of $0.6 million, and a deferred tax benefit of $0.3 million. Working capital changes using cash consisted primarily of a $1.5 million increase in inventories, a $0.2 million decrease in accounts payable, a $0.4 million decrease in accrued compensation and a $0.3 million decrease in other accrued liabilities, partially offset by a $2.0 million decrease in accounts receivable and a $0.1 million decrease in other assets. Inventories increased due to selective increases of certain inventories in the first half of 2008 to meet anticipated customer delivery requirements, an increase in the number of demonstration equipment units used for new customer evaluations, and lower-than-anticipated net sales in the second half of the year. Accounts payable decreased primarily due to reduced inventory purchases in the fourth quarter of 2008 compared with the fourth quarter of 2007. Accrued compensation decreased primarily due to the elimination of profit-related incentives in the second half of 2008. The decrease in accrued liabilities included a $0.1 million decrease in accrued no-charge equipment improvement costs and a $0.1 million decrease in deferred revenue. Accounts receivable decreased primarily due to a significant decrease in net sales in the fourth quarter of 2008 compared with the fourth quarter of 2007. Net cash provided by investing activities in 2008 was not significant. Net cash used in financing activities in 2008 amounted to $0.1 million and was primarily related to the repurchase of shares of common stock in connection with stock option exercises.

Historically we have supported our capital expenditure and working capital needs with cash generated from operations and our existing cash and cash equivalents. We believe our cash and cash equivalents of $9.5 million at December 31, 2009 will be sufficient to meet capital expenditure and working capital requirements at least through 2010. In addition, we have a revolving credit line agreement with a bank that provides for borrowings up to $2.0 million. Advances under the agreement are at the sole discretion of the bank. Therefore, there can be no assurance that funds will be available to us under the agreement. The credit agreement expires in December 2010. As discussed above, we have recently seen signs of improving economic and industry business conditions and we expect our financial results to improve in fiscal year 2010. However, there can be no assurance that the positive momentum we see in early 2010 will continue and that changes in semiconductor industry conditions, general domestic and global economic conditions, and/or other factors will not adversely impact Aetrium's future operating results. Also, we may acquire other companies, product lines or technologies that are complementary to our business, and our working capital needs may change as a result of such acquisitions.

Recent Accounting Pronouncements:

Effective with the quarter ended September 30, 2009, Aetrium adopted the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 105, "Generally Accepted Accounting Principles." ASC 105 establishes the FASB Accounting Standards Codification ("Codification") as the source of authoritative accounting principles recognized by the FASB to be applied by non-governmental entities in the preparation of financial statements in conformity with generally accepted accounting principles (GAAP) in the United States. The Codification also provides that rules and interpretive releases of the U. S. Securities and Exchange Commission (SEC) issued under the authority of federal securities laws will continue to be sources of authoritative GAAP for SEC registrants. Since adopting this guidance, we have changed all references to authoritative standards to be consistent with those set forth in the Codification. The adoption of ASC 105 had no impact on our consolidated financial position, results of operations or cash flows.

In October 2009, the FASB issued authoritative guidance for revenue recognition with multiple deliverables. This authoritative guidance impacts the determination of when the individual deliverables included in a multiple-element arrangement may be treated as separate units of accounting. Additionally, this guidance modifies the manner in which the transaction consideration is allocated to separately identified deliverables by no longer permitting the residual method of allocating arrangement consideration. This new guidance is effective for Aetrium at the beginning of fiscal year 2011, with early adoption permitted. The implementation of this guidance is not expected to have a material impact on our consolidated financial position, results of operations or cash flows.

In October 2009, the FASB issued new accounting guidance for the accounting for certain revenue arrangements that include software elements. The new guidance amends the scope of pre-existing software revenue guidance by removing from the guidance non-software components of tangible products and certain software components of tangible products. The new guidance will be effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, and will be effective for us at the beginning of fiscal year 2011. However, early adoption is permitted. We are currently evaluating what impact, if any, this new guidance will have on Aetrium.

In May 2009, the FASB issued new accounting guidance regarding subsequent events. The guidance establishes general standards of accounting for and disclosure of events or transactions occurring after the balance sheet date but before financial statements are issued or are available to be issued. In addition, it requires disclosure of the date through which subsequent events have been evaluated. We adopted this guidance as of June 30, 2009, which was the required effective date. This guidance was subsequently amended and we are no longer required to disclose the date through which we evaluate subsequent events.

In December 2007, the FASB issued new guidance regarding business combinations, which establishes principles and requirements for how the acquirer in a business combination recognizes and measures in its financial statements the fair value of identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree at the acquisition date. This guidance also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination. This guidance became effective for Aetrium at the beginning of fiscal year 2009 and had no impact on our consolidated financial position, results of operations or cash flows.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The information required by this Item is included in our Consolidated Financial Statements and the report of our independent registered public accounting firm, which are included in this Annual Report on Form 10-K beginning on page F-1. The index to this report and the financial statements is included in Item 15(a)(1) below.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A(T). CONTROLS AND PROCEDURES

Disclosure Controls and Procedures:

Our Chief Executive Officer, our Chief Administrative Officer and our Treasurer conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e)). Based on their evaluation, they concluded that our disclosure controls and procedures were effective as of December 31, 2009, the end of the period covered by this annual report.

Management's Report on Internal Control over Financial Reporting:

Aetrium's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our Chief Executive Officer, our Chief Administrative Officer and our Treasurer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2009.

This annual report does not include an attestation report of the company's registered public accounting firm regarding internal control over financial reporting. Internal control over financial reporting was not subject to attestation by the company's registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the company to provide only management's report in this annual report.

Changes in Internal Control over Financial Reporting:

There were no changes in our internal control over financial reporting that occurred during the fourth quarter of 2009 that have materially affected, or are reasonably likely to materially affect, Aetrium's internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Procedures and Internal Control over Financial Reporting:

It should be noted that any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system will be met. In designing and operating a control system, one must consider the potential benefits of controls relative to their costs and the reality of limited resources available to allocate to control activities, particularly in smaller companies. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events and there can be no assurance that any control will meet its objectives under all potential future conditions. Because of such inherent limitations in any control system, there can be no absolute assurance that control issues, misstatements, and/or fraud will be prevented or detected.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Directors of the Registrant

The information under the captions “Election of Directors — Information About Mr. Westling,” “Election of Directors—Information About Mr. Pollock,” “Election of Directors —Information About Other Nominees” and “Election of Directors—Additional Information About the Board and Its Committees” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Executive Officers of the Registrant

The information under the caption “Item 4A. Executive Officers of the Registrant” located elsewhere in this Annual Report on Form 10-K is incorporated herein by reference.

Compliance with Section 16(a) of the Exchange Act

The information under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Identification of Audit Committee; Audit Committee Financial Expert

The information under the caption “Audit Committee Report – Membership and Role of the Audit Committee” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Code of Ethics

The information under the caption “Code of Ethics” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

ITEM 11. EXECUTIVE COMPENSATION.

The information under the captions “Election of Directors — Compensation of Non-Employee Directors” and “Executive Compensation and Other Benefits” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

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

The information under the caption “Security Ownership of Certain Beneficial Owners and Management” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

Securities Authorized for Issuance under Equity Compensation Plans

The following table summarizes information about our equity compensation plans as of December 31, 2009:

EQUITY COMPENSATION PLAN INFORMATION

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights[1]	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column) [2]
Equity compensation plans approved by security holders	1,721,521	$2.34	399,605
Equity compensation plans not approved by security holders	None	Not applicable	None
Total	1,721,521	$2.34	399,605

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(1) Includes the Aetrium Incorporated 2003 Stock Incentive Plan.

(2) The number of shares available for issuance under the Aetrium Incorporated 2003 Stock Incentive Plan is equal to 20% of the aggregate number of shares of our common stock outstanding less the total number of shares of common stock issuable upon the exercise or conversion of any outstanding stock options, warrants, or other stock rights

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

The information under the captions “Election of Directors—Additional Information About the Board and Its Committees” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The information concerning principal accountant fees and services and the audit committee’s pre-approval polices and procedures under the captions “Independent Registered Public Accounting Firm—Audit and Non-Audit Fees” and “Independent Registered Public Accounting Firm—Pre-approval Policies and Procedures” in our 2010 Proxy Statement is incorporated in this Annual Report on Form 10-K by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) 1. Financial Statements of Registrant.

The following Consolidated Financial Statements of Aetrium Incorporated and the Independent Registered Public Accounting Firm's Report thereon are included herein:

(a) 2. Financial Statement Schedule of Registrant.

All other schedules are omitted as the required information is inapplicable or the information is presented in the financial statements or related notes.

(a) 3. Exhibits.

The exhibits to this Annual Report on Form 10-K are listed in the Exhibit Index beginning on page E-1 of this Annual Report on Form 10-K.

If you were one of our shareholders on March 31, 2010 and you want a copy of any of the exhibits listed or referred to in the Exhibit Index, we will furnish it to you at a reasonable cost upon your written request sent to Aetrium Incorporated, 2350 Helen Street, North St. Paul, Minnesota 55109, Attn.: Shareholder Relations.

The following is a list of each management contract or compensatory plan or arrangement we are required to file as an exhibit to this Annual Report on Form 10-K pursuant to Item 15(b):

1. Form of Incentive Stock Option Agreement (incorporated by reference to Exhibit 10.6 to our Annual Report on Form 10-KSB for the year ended December 31, 1993) (File No. 0-22166).

2. Form of Non-Statutory Stock Option Agreement (incorporated by reference to Exhibit 10.7 to our Annual Report on Form 10-KSB for the year ended December 31, 1993) (File No. 0-22166).

3. 1993 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.2 to our Annual Report on Form 10-K for year ended December 31, 1997) (File No. 0-22166).

4. Salary Savings Plan (incorporated by reference to Exhibit 10.3 to our Registration Statement on Form SB-2) (File No. 33-64962C).

5. Employment Agreement dated April 1, 1986 between Joseph C. Levesque and us (incorporated by reference to Exhibit 10.6 to our Registration Statement on Form SB-2) (File No. 33-64962C).

6. 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10.18 to our Annual Report on Form 10-K for the year ended December 31, 2002) (File No. 0-22166).

7. Form of Change of Control Agreement (incorporated by reference to Exhibit 10.19 to our Annual Report on Form 10-K for the year ended December 31, 2003) (File No. 0-22166).

8. Form of Amendments to Change of Control Agreement (incorporated by reference to Exhibit 10.18 to our Annual Report on Form 10-K for the year ended December 31, 2007) (File No. 0-22166).

9. Sales Incentive Program (incorporated by reference to Exhibit 10.21 to our Annual Report on Form 10-K for the year ended December 31, 2003) (File No. 0-22166).

10. Executive Officer Profit Sharing Program (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K dated January 23, 2007) (File No. 0-22166).

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FINANCIAL STATEMENTS OF REGISTRANT

Report of Independent Registered Public Accounting Firm

Board of Directors and Shareholders
Aetrium Incorporated

We have audited the accompanying consolidated balance sheets of Aetrium Incorporated (a Minnesota corporation) and subsidiary as of December 31, 2009 and 2008, and the related consolidated statements of operations, changes in shareholders' equity and cash flows for each of the two years in the period ended December 31, 2009. Our audits of the basic financial statements included the financial statement schedule listed in the index appearing under Item 15. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Aetrium Incorporated and subsidiary as of December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2009 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/GRANT THORNTON LLP

Minneapolis, Minnesota

March 30, 2010

AETRIUM INCORPORATED
Consolidated Statements of Operations

Year Ended December 31,		2009		2008
Net sales	**$**	**8,648,515**	$	17,217,477
Cost of goods sold		**5,527,531**		8,949,602
Gross profit		**3,120,984**		8,267,875
Operating expenses:				
Selling, general and administrative		**5,168,783**		6,519,929
Research and development		**2,195,026**		3,018,141
Total operating expenses		**7,363,809**		9,538,070
Loss from operations		**(4,242,825)**		(1,270,195)
Interest income, net		**135,449**		346,752
Loss before income taxes		**(4,107,376)**		(923,443)
Income tax benefit (expense)		**(2,621,000)**		311,000
Net loss	**$**	**(6,728,376)**	$	(612,443)
Loss per share - basic and diluted	**$**	**(0.63)**	$	(0.06)
Weighted average common shares outstanding – basic and diluted		**10,599,000**		10,583,000

The accompanying notes are an integral part of the consolidated financial statements.

AETRIUM INCORPORATED
Consolidated Balance Sheets

December 31,		**2009**		2008
ASSETS				
Current assets:				
Cash and cash equivalents	**$**	**9,475,871**	$	11,628,962
Accounts receivable, net of allowance for doubtful accounts of $40,000 in 2009 and 2008		**2,114,109**		1,539,345
Inventories		**7,472,261**		9,161,840
Deferred income taxes		—		127,000
Other current assets		**233,548**		297,982
Total current assets		**19,295,789**		22,755,129
Property and equipment:				
Furniture and fixtures		**521,450**		521,450
Equipment		**1,177,785**		1,203,214
Less accumulated depreciation and amortization		**(1,601,398)**		(1,581,980)
Property and equipment, net		**97,837**		142,684
Deferred income taxes		—		2,489,000
Other assets		—		214,947
Total assets	**$**	**19,393,626**	$	25,601,760
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities:				
Current portion of long-term debt	**$**	—	$	11,678
Trade accounts payable		**707,310**		571,224
Accrued compensation		**268,269**		286,375
Other accrued liabilities		**400,600**		632,733
Total current liabilities		**1,376,179**		1,502,010
Commitments and contingencies (See Note 9)				
Shareholders' equity:				
Common stock, $.001 par value; 30,000,000 shares authorized; 10,605,631 and 10,598,131 shares issued and outstanding at December 31, 2009 and 2008, respectively		**10,606**		10,598
Additional paid-in capital		**64,311,125**		63,665,060
Accumulated deficit		**(46,304,284)**		(39,575,908)
Total shareholders' equity		**18,017,447**		24,099,750
Total liabilities and shareholders' equity	**$**	**19,393,626**	$	25,601,760

The accompanying notes are an integral part of the consolidated financial statements.

AETRIUM INCORPORATED
Consolidated Statements of Changes in Shareholders' Equity

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount			
Balance, December 31, 2007	10,542,611	$ 10,543	$ 63,094,494	$ (38,963,465)	$ 24,141,572
Exercise of stock options	165,159	165	455,767	—	455,932
Repurchase of shares in connection with exercise of stock options	(109,639)	(110)	(487,451)	—	(487,561)
Share-based compensation expense	—	—	602,250	—	602,250
Net loss	—	—	—	(612,443)	(612,443)
Balance, December 31, 2008	10,598,131	10,598	63,665,060	(39,575,908)	24,099,750
Exercise of stock options	7,500	8	16,736	—	16,744
Share-based compensation expense	—	—	629,329	—	629,329
Net loss	—	—	—	(6,728,376)	(6,728,376)
Balance, December 31, 2009	10,605,631	$ 10,606	$ 64,311,125	$ (46,304,284)	$ 18,017,447

The accompanying notes are an integral part of the consolidated financial statements.

AETRIUM INCORPORATED
Consolidated Statements of Cash Flows

Year Ended December 31,	2009	2008
Cash flows from operating activities:		
Net loss	**$ (6,728,376)**	$ (612,443)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	**70,243**	100,773
Share-based compensation expense	**629,329**	602,250
Deferred income taxes	**2,616,000**	(299,000)
Provision for bad debts	—	(6,212)
Provision for excess and obsolete inventories	**155,000**	—
Changes in assets and liabilities:		
Accounts receivable	**(574,764)**	2,009,293
Inventories	**1,534,579**	(1,466,971)
Other current assets	**99,816**	62,707
Other assets	**1,761**	72,665
Trade accounts payable	**136,086**	(210,642)
Accrued compensation	**(18,106)**	(382,907)
Other accrued liabilities	**(160,133)**	(301,153)
Net cash used in operating activities	**(2,238,565)**	(431,640)
Cash flows from investing activities:		
Purchase of property and equipment	**(25,396)**	(58,423)
Collection of note receivable	**105,804**	90,667
Net cash provided by investing activities	**80,408**	32,244
Cash flows from financing activities:		
Proceeds from exercise of stock options	**16,744**	56,469
Payments on long-term debt	**(11,678)**	(44,871)
Repurchase of shares in connection with exercise of stock options	—	(88,098)
Net cash provided by (used in) financing activities	**5,066**	(76,500)
Net decrease in cash and cash equivalents	**(2,153,091)**	(475,896)
Cash and cash equivalents at beginning of year	**11,628,962**	12,104,858
Cash and cash equivalents at end of year	**$ 9,475,871**	$ 11,628,962
Supplemental cash flow information:		
Cash paid (received) for:		
Interest	**$ 948**	$ 2,478
Income taxes	**$ 1,004**	$ (12,817)

The accompanying notes are an integral part of the consolidated financial statements.

AETRIUM INCORPORATED

Notes to Consolidated Financial Statements

NOTE 1: BUSINESS DESCRIPTION

Aetrium Incorporated designs, manufactures and markets a variety of electromechanical equipment used by the semiconductor industry to handle and test integrated circuits, or ICs. Our products are sold primarily to semiconductor manufacturers and their assembly and test subcontractors located in the United States and in foreign locations. References in the Notes to Consolidated Financial Statements to "Aetrium," "the company," "we" or "our," unless the context otherwise requires, refer to Aetrium Incorporated and its consolidated subsidiary and their respective predecessors.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation: The consolidated financial statements include the accounts of Aetrium Incorporated and its wholly owned subsidiary. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates: The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash Equivalents: Cash equivalents consist of highly liquid investments with a maturity of three months or less when purchased. Cash equivalents at December 31, 2009 included investments in certificates of deposit (CDs) of $4.0 million. Cash equivalents at December 31, 2008 included investments in money market funds of $8.1 million and CDs of $3.5 million. In accordance with ASC 820, "Fair Value Measurements and Disclosures," money market funds are classified as Level 1 investments and are recorded at fair value based on quoted prices in active markets. CDs are classified as held-to-maturity Level 2 investments for which fair value is based on observable inputs other than quoted prices in active markets. We recorded our CDs at cost, which at December 31, 2009 and 2008, approximated fair value. We maintain our cash equivalents in accounts that, at times, may exceed the insurance limits of the Federal Deposit Insurance Corporation.

Accounts Receivable and Allowance for Doubtful Accounts: Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is our best estimate of losses that may result from the uncollectability of accounts receivable. We determine the allowance based primarily on an analysis of individual accounts. We also evaluate the collectability of our accounts receivable in the aggregate based on factors such as the aging of receivable amounts, customer concentrations, historical experience, and current economic trends and conditions. Account balances are charged off against the allowance when we feel it is probable the receivable will not be recovered. We do not have any off-balance-sheet credit exposure related to our customers.

Inventories: Inventories are valued at the lower of cost or market, with cost determined on a first-in, first-out basis. We adjust our inventories for estimated excess and obsolete items by reducing their carrying values to estimated realizable value based upon assumptions about future product demand and market conditions.

Property and Equipment: Furniture, fixtures and equipment are recorded at cost and are depreciated using the double declining balance method over estimated useful lives ranging from three to seven years. When assets are retired or disposed of, the cost and accumulated depreciation are removed from the accounts. Depreciation expense was $0.1 million for the each of the years ended December 31, 2009 and 2008. Maintenance and repairs are charged to expense as incurred.

Valuation of Long-Lived Assets: Aetrium reviews its long-lived assets for impairment whenever an event or change in circumstances indicates that the carrying value of an asset may not be recoverable. If such an event or change in circumstances occurs and potential impairment is indicated because the carrying values exceed the estimated future undiscounted cash flows, we would measure the impairment loss as the amount by which the carrying value of the asset exceeds its fair value. There were no impairment charges during the years ended December 31, 2009 and 2008.

Revenue Recognition: We recognize revenue on product sales when there is persuasive evidence of an arrangement, the sales price is fixed or determinable, title and risk of loss have passed to the customer, contractual obligations have been substantially met, and collection of the related receivable is reasonably assured. Revenue on spare parts and change kits is generally recognized upon shipment. In some circumstances, revenue on equipment sales is recognized subsequent to shipment. For example, equipment sales contracts may specify that customer acceptance criteria be met. In such cases, revenue for established equipment products that have previously met a customer's acceptance criteria is generally recognized upon shipment, provided the equipment meets our final test requirements that we believe substantially demonstrates conformance to the customer's acceptance criteria. However, revenue for equipment products that are newly designed or otherwise lack a reliable history of customer acceptance is deferred until objective evidence of customer acceptance has been obtained. In situations where equipment contracts include significant post-shipment obligations to be performed by us, revenue for the entire transaction is deferred until such obligations have been completed or, if applicable, the transaction is accounted for as a multiple-element arrangement. For arrangements containing multiple elements, the amounts allocated to delivered and undelivered elements are based on their fair value and revenue is recognized upon delivery of each element. Sales tax billed to customers is excluded from revenue. In situations where equipment is shipped but revenue and the related receivable are not recognized, the cost of the equipment is included in inventories in our consolidated balance sheet. We often receive payments from customers prior to recognizing revenue. For example, we may receive partial payments prior to shipment, which we record as "customer deposits" or we may receive partial payments after shipment but prior to recognizing revenue, which we record as "deferred revenue." Customer deposits and deferred revenue are recorded as liabilities and included as a component of "Other accrued liabilities" in our consolidated balance sheet. See Notes 6 and 7.

Advertising Costs: Advertising costs are expensed as incurred. Advertising costs were immaterial for each of the years ended December 31, 2009 and 2008.

Warranty Costs: Our products are sold with warranty periods that vary by item and range up to two years. Estimated warranty costs are accrued in the period that the related revenue is recognized. The following table summarizes product warranty expense accruals and settlements for the two years ended December 31, 2009 (in thousands):

	Accrual balance at beginning of year	Accruals for warranties	Settlements made	Accrual balance at end of year
2008	$ 134	$ 241	$ (260)	$ 115
2009	**115**	**29**	**(62)**	**82**

Accrued warranty costs are included in the caption "Other accrued liabilities" in our consolidated balance sheet. See Note 7.

Research and Development: Research and development expenditures, which include software development costs, are expensed as incurred. Accounting Standards Codification (ASC) 730, "Research and Development" requires the capitalization of certain software development costs once technological feasibility is established, which we define as the completion of a working model. To date, the period between achieving technological feasibility and the general availability of such software that is embedded in our equipment has been short and software development costs qualifying for capitalization have been insignificant. Accordingly, we have not capitalized any software development costs.

Income Taxes: Income taxes are accounted for in accordance with ASC 740, "Income Taxes." We record income tax expense or benefit based on our estimate of the effective tax rates for the jurisdictions in which we do business. Deferred tax assets are recognized for deductible temporary differences and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. We assess our income tax positions for all years subject to examination based upon our evaluation of the facts, circumstances and information available at the reporting dates. For those tax positions where it is more likely than not that a tax benefit will be sustained, we record the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit is recorded. Interest expense associated with income taxes, if any, is classified as income tax expense. See Note 12 for additional information regarding income taxes.

Loss Per Common Share: Basic and diluted loss per common share is computed by dividing net loss by the weighted-average number of common shares outstanding during each period. The computation of diluted loss per share excludes the impact of stock options because they would be antidilutive. A reconciliation of the number of shares used in the computations of basic and diluted loss per share follows (in thousands):

Year ended Dec. 31,	**2009**	2008
Weighted average common shares outstanding	**10,599**	10,583
Potentially dilutive stock options	—	—
Weighted average common shares outstanding, assuming dilution	**10,599**	10,583

As of December 31, 2009 and 2008, there were 1,721,521 and 1,818,144 stock options outstanding, respectively, that could have potentially impacted diluted income per share.

Share-Based Compensation: We accounted for share-based compensation in accordance with the provisions of ASC 718, "Compensation – Stock Compensation," which requires the measurement and recognition of all share-based compensation under the fair value method. See Notes 4 and 10 for additional information regarding share-based compensation and our stock incentive plan.

NOTE 3: NOTE RECEIVABLE

In connection with the sale of our Dallas, Texas operations to WEB Technology, Inc. (WEB) in 2006, we received a promissory note from WEB that provided for installment payments through December 2008. In July 2008, at WEB's request, the note was restructured to provide for installment payments through December 2010. The current portion of the note receivable balance is included in the caption "Other current assets" and the long-term portion is included in the caption "Other assets" in our consolidated balance sheet as follows (in thousands):

December 31,	**2009**	2008
Current portion - included in "Other current assets"	**$ 137**	$ 106
Long-term portion - included in "Other assets"	—	137
Total note receivable	**$ 137**	$ 243

NOTE 4: SHARE-BASED COMPENSATION

We determine the fair value of share-based awards on the grant date using the Black-Scholes option valuation model. We also use the Black-Scholes model to determine the fair value of modifications to awards by determining and comparing the fair value of the modified award with the fair value of the award immediately before the modification. Option valuation models, including Black-Scholes, require the input of subjective assumptions, and changes in the assumptions used can materially affect the determination of the fair value of an award. These assumptions include expected stock price volatility, risk-free interest rate, expected dividend yield, and the expected life of the award. We estimate future stock price volatility based primarily on historical daily stock price observations of our common stock. Risk-free interest rate is estimated based on U.S. Treasury bill rates consistent with the expected term of an award. We assume an expected dividend yield of zero based on our intention to retain any future earnings for use in our operations. Expected life of an award is estimated primarily based on vesting provisions, the contractual term of the award, and historical experience of previous awards with similar terms or, for situations in which historical experience is not available or is deemed unreliable, we use the simplified method for estimating the expected life of an award, as permitted by ASC 718. ASC 718 also requires that estimated forfeitures be considered in the calculation of future compensation expense at the date of grant. We use historical data, as adjusted if deemed appropriate, to estimate future option forfeiture rates for purposes of recognizing share-based compensation expense.

Using the Black-Scholes option valuation model, the weighted-average fair value of options granted in 2009 and 2008 was determined to be $0.46 and $1.07, respectively. Weighted average assumptions used in applying the Black-Scholes option-pricing model to estimate the fair value of options granted were as follows:

Year ended December 31,	**2009**	2008
Expected dividend yield	**0%**	0%
Expected stock price volatility	**48%**	42%
Risk-free interest rate	**1.2%**	2.5%
Expected life of options (years)	**3.5**	3.5

In May 2009, Aetrium shareholders approved the re-pricing of certain outstanding stock options that had been previously granted pursuant to our 2003 Stock Incentive Plan. The modified options were held by 48 option holders, including Aetrium officers, directors and employees. A total of 1,536,249 options with exercise prices ranging from $3.095 to $4.33 per share were modified to provide for exercise prices ranging from $2.2175 to $2.34 per share. The new exercise prices were determined based on a formula tied to the fair market value of our common stock on the modification date, which was $1.34 per share. The incremental fair value of the option modifications, using the Black-Scholes valuation model, was determined to be approximately $117,000. Of this amount, approximately $63,000 was related to vested options and was expensed on the modification date. The remaining expense is being recognized over the remaining vesting periods of the applicable options.

In February 2009, pursuant to our 2003 Stock Incentive Plan, we granted a stock option to purchase 30,000 shares of our common stock at an exercise price of $1.265 per share, the fair market value of the common stock on the date of the grant. The option vests in monthly increments over four years and will expire five years after the grant date. The fair value of the option was determined to be approximately $14,000, which amount is being expensed over the four-year vesting period.

Also in February 2009, we modified the terms of vested options held by a former Aetrium director who retired in December 2008. The options were to expire ninety days following his retirement date. The options, which were "under water" on the modification date, were modified to extend the expiration dates to their respective original contract terms. The total fair value of the modifications was less than $1,000.

In November 2006, we modified the terms of 223,000 stock options to reduce the exercise prices to $3.00 per share (the then fair market value of a share of our common stock). The options had been originally granted pursuant to our 2003 Stock Incentive Plan (Plan). None of the modified stock options were held by named executive officers or directors of Aetrium. In December 2008, we discovered that the Plan does not permit repricing of outstanding options. In order to remain compliant with the provisions of the Plan, we determined that the repriced options be deemed to continue to be outstanding on their original terms and that the repricing action taken in November 2006 be deemed a grant of 223,000 additional stock options with exercise prices of $3.00 and otherwise on the terms granted in November 2006. Cumulative share-based compensation expense associated with the new options amounted to $98,000 and was recorded in the fourth quarter of 2008. Aetrium's financial statements for prior periods were not restated as the impact of the additional stock options and related compensation expense was determined to be immaterial.

Share-based compensation expense included in our consolidated statements of operations was as follows (in thousands):

Year ended December 31,	**2009**	2008
Cost of goods sold	**$ 90**	$ 81
Selling, general and administrative	**423**	412
Research and development	**116**	109
Total share-based compensation expense	**$ 629**	$ 602

As of December 31, 2009, we had approximately $0.7 million of unrecognized pretax share-based compensation expense, which is expected to be recognized over a weighted average period of 1.6 years.

NOTE 5: RECENT ACCOUNTING PRONOUNCEMENTS

Effective with the quarter ended September 30, 2009, Aetrium adopted the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 105, "Generally Accepted Accounting Principles." ASC 105 establishes the FASB Accounting Standards Codification ("Codification") as the source of authoritative accounting principles recognized by the FASB to be applied by non-governmental entities in the preparation of financial statements in conformity with generally accepted accounting principles (GAAP) in the United States. The Codification also provides that rules and interpretive releases of the U. S. Securities and Exchange Commission (SEC) issued under the authority of federal securities laws will continue to be sources of authoritative GAAP for SEC registrants. Since adopting this guidance, we have changed all references to authoritative standards to be consistent with those set forth in the Codification. The adoption of ASC 105 had no impact on our consolidated financial position, results of operations or cash flows.

In October 2009, the FASB issued authoritative guidance for revenue recognition with multiple deliverables. This authoritative guidance impacts the determination of when the individual deliverables included in a multiple-element arrangement may be treated as separate units of accounting. Additionally, this guidance modifies the manner in which the transaction consideration is allocated to separately identified deliverables by no longer permitting the residual method of allocating arrangement consideration. This new guidance is effective for Aetrium at the beginning of fiscal year 2011, with early adoption permitted. The implementation of this guidance is not expected to have a material impact on our consolidated financial position, results of operations or cash flows.

In October 2009, the FASB issued new accounting guidance for the accounting for certain revenue arrangements that include software elements. The new guidance amends the scope of pre-existing software revenue guidance by removing from the guidance non-software components of tangible products and certain software components of tangible products. The new guidance will be effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, and will be effective for us at the beginning of fiscal year 2011. However, early adoption is permitted. We are currently evaluating what impact, if any, this new guidance will have on Aetrium.

In May 2009, the FASB issued new accounting guidance regarding subsequent events. The guidance establishes general standards of accounting for and disclosure of events or transactions occurring after the balance sheet date but before financial statements are issued or are available to be issued. In addition, it requires disclosure of the date through which subsequent events have been evaluated. We adopted this guidance as of June 30, 2009, which was the required effective date. This guidance was subsequently amended and we are no longer required to disclose the date through which we evaluate subsequent events.

In December 2007, the FASB issued new guidance regarding business combinations, which establishes principles and requirements for how the acquirer in a business combination recognizes and measures in its financial statements the fair value of identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree at the acquisition date. This guidance also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination. This guidance became effective for Aetrium at the beginning of fiscal year 2009 and had no impact on our consolidated financial position, results of operations or cash flows.

NOTE 6: INVENTORIES

Inventories are comprised of the following (in thousands):

December 31,	**2009**	2008
Purchased parts and completed subassemblies	**$ 4,550**	$ 5,978
Work-in-process	**896**	456
Finished goods, including saleable demonstration equipment	**2,026**	2,686
Equipment shipped, subject to revenue deferral	—	42
Total inventories	**$ 7,472**	$ 9,162

We adjust our inventories for estimated excess and obsolete items by reducing their carrying values to estimated realizable value based upon assumptions about future product demand and market conditions. In December 2009, we completed an analysis of inventories and determined that the realizable value of inventories for certain of our older products had diminished. Accordingly, we increased our inventory reserve by $155,000 in the fourth quarter of 2009. During fiscal year 2009, we disposed of obsolete inventories with a cost of approximately $0.8 million. Our reserve for excess and obsolete inventories was $0.9 million and $1.6 million at December 31, 2009 and 2008, respectively.

NOTE 7: OTHER ACCRUED LIABILITIES:

Other accrued liabilities are comprised of the following (in thousands):

December 31,	**2009**	2008
Accrued commissions	**$ 59**	$ 75
Accrued warranty	**82**	115
Customer deposits and deferred revenue	—	61
Accrued severance and related costs	—	102
Accrued health insurance benefits	**79**	57
Subtenant deposits	**`21**	93
Other	**160**	130
Total other accrued liabilities	**$ 401**	$ 633

NOTE 8: CREDIT AGREEMENT

Aetrium has a revolving credit line agreement with a bank that provides for borrowings up to $2.0 million and bears interest at the prime rate plus 1.0% with a minimum interest rate of 4.5%. The agreement is collateralized by substantially all of our assets and expires in December 2010. Advances under the agreement are at the sole discretion of the bank. Therefore, there can be no assurance that funds will be available to us under the agreement. At December 31, 2009 and 2008, there were no borrowings under line of credit agreements.

NOTE 9: LEASE OBLIGATIONS

We lease our facility in North St. Paul, Minnesota from a limited liability company controlled by a shareholder of Aetrium. The shareholder is neither a director nor officer of Aetrium, and, to our knowledge, does not own more than five percent of our common stock. The lease agreement provides for monthly base rents which were $24,285 as of December 31, 2009 and increase 2% annually through the end of the lease term. The agreement expires on February 28, 2011, at which time we have an option to extend the lease for an additional five-year term.

In 2000, we vacated a leased facility in Poway, California under a lease agreement that expired on January 31, 2010. Since 2006, the facility was subleased to two independent parties with the sublease terms running concurrently through the end of our lease term. During fiscal year 2009, one of the subtenants was in default under its sublease agreement with us for non-payment of rents. This subtenant indicated to us that it had received a substantial multi-year sales contract and had commenced deliveries pursuant to the contract during 2009 but was not able to pay us on a timely basis due to working capital constraints. In September 2009, we filed a legal action against the subtenant in the State of California to recover amounts owed to us. During the fourth quarter of 2009, the subtenant vacated the facility. As of December 31, 2009 the recorded receivable from the subtenant for past-due rents and related costs had increased to $318,000. Although we intend to pursue all legal remedies against this subtenant, we determined it is unlikely we will recover the amounts owed to us under the sublease agreement. Therefore, we recorded a charge of $318,000 in the fourth quarter of 2009 to fully reserve this receivable. In addition, we recorded a charge of $54,000 for the unpaid January 2010 rent and related costs we expect to incur. The accrued expenses of $54,000 are included in “Other accrued liabilities” in our consolidated balance sheet at December 31, 2009. The total charge of $372,000 related to this matter is included in

"Selling, general and administrative expenses" in our consolidated statement of operations for the year ended December 31, 2009.

In late March 2010, we reached an accord with the delinquent subtenant under which we agreed to settle our claim for a cash payment of $175,000 if received by April 21, 2010. If we do not receive the cash payment by that date, under the terms of the accord we will be awarded a default judgment against the subtenant in the amount of approximately $423,000. We have no assurance that the subtenant will make the agreed upon cash payment or that we would be able to collect any amount on a default judgment if awarded.

As of December 31, 2009, future minimum annual lease payments under operating leases were as follows (in thousands):

2010	$ 347
2011	50
Total minimum lease payments	$ 397

Rent expense, including facility and various short-term equipment operating leases, was as follows (in thousands):

Year ended Dec. 31,	**2009**	2008
Paid to company controlled by shareholder	**$ 291**	$ 291
Paid to others	**547**	536
Sublease/assigned lease income	**(403)**	(521)
Total net rent expense	**$ 435**	$ 306

NOTE 10: STOCK OPTION PLAN

In May 2003, Aetrium's shareholders approved the adoption of the 2003 Stock Incentive Plan (Plan). Employees, officers, directors, consultants and independent contractors providing services to us are eligible to receive awards under the Plan. The number of shares available for issuance under the Plan is equal to 20% of the aggregate number of shares of common stock outstanding less the total number of shares of common stock issuable upon the exercise or conversion of any outstanding stock options, warrants or other stock rights. The Plan is administered by the Compensation Committee of our board of directors and provides for the granting of: (a) stock options; (b) stock appreciation rights; (c) restricted stock; (d) performance awards; and (e) stock awards valued in whole or in part by reference to or otherwise based upon our stock. Options granted under the Plan may be incentive stock options or nonqualified stock options. To date, nonqualified stock options are the only awards that we have granted under the Plan. The Plan will terminate on February 28, 2013. The Plan provides that the Compensation Committee may, at its discretion, allow the exercise price of stock options to be paid, in whole or in part, by tendering previously acquired shares that have been held by the option holder for at least six months.

The following table summarizes activity under our stock incentive plan for the year ended December 31, 2009:

	Number Of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contract Term	Aggregate Intrinsic Value (in thousands)
Outstanding, January 1, 2009	1,818,144	$ 3.65		
Granted	30,000	1.27		
Exercised	(7,500)	2.23		
Forfeited	(10,500)	3.10		
Expired	(108,623)	4.70		
Outstanding, December 31, 2009	1,721,521	$ 2.34	2.1 years	$ 497
Options at December 31, 2009:				
Exercisable and expected to become exercisable	1,687,091	$ 2.34	2.1 years	$ 487
Exercisable	1,227,540	$ 2.37	1.8 years	$ 328

As explained in Note 4, in May 2009, Aetrium shareholders approved the re-pricing of certain outstanding stock options. A total of 1,536,249 options with exercise prices ranging from $3.095 to $4.33 per share were modified to provide for exercise prices ranging from $2.2175 to $2.34 per share. The December 31, 2009 balances in the table above reflect the modified exercise prices of such options.

The aggregate intrinsic values in the table above represents the total pretax intrinsic value (the difference between Aetrium's closing stock price on December 31, 2009 and the option exercise price) of all in-the-money stock options that would have been received by the option holders had they exercised their options on December 31, 2009. The aggregate intrinsic value of options exercised during the years ended December 31, 2009 and 2008 was approximately $1,000 and $270,000, respectively. Total compensation expense recognized for options vested during the years ended December 31, 2009 and 2008 was approximately $629,000 and $602,000 respectively.

During fiscal year 2008, in connection with certain stock option exercises, employees surrendered 89,831 shares ($399,463 fair market value) and 19,808 shares ($88,098 fair market value) of common stock as payment for the exercise prices and related withholding tax obligations, respectively, of such options.

The following table summarizes information related to stock options outstanding at December 31, 2009, all of which are nonqualified options and expire five years after the grant date and of which 272,000 options were fully exercisable when granted and 1,449,521 options become exercisable over four years from date of grant. The table reflects the re-pricing of certain options as described above**:**

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$ 1.27	30,000	4.1 years	$ 1.27	6,250	$ 1.27
2.22 to $ 2.34	1,528,749	2.1 years	2.29	1,084,229	2.30
3.00	162,772	1.6 years	3.00	137,061	3.00
$ 1.27 to $ 3.00	1,721,521	2.1 years	$ 2.34	1,227,540	$ 2.37

NOTE 11: EMPLOYEE SAVINGS 401(k) PLAN

Aetrium has a 401(k) employee savings plan, which covers full-time employees who are at least 21 years of age. Our contributions to the savings plan are at the discretion of management. We contributed $0 and $103,251, respectively, to the plan in 2009 and 2008.

NOTE 12: INCOME TAXES

Income tax expense (benefit) consists of the following components (in thousands):

Year ended December 31,	**2009**	2008
Current tax expense:		
Federal	**$ —**	$ —
State	**5**	6
Total current expense	**5**	6
Deferred tax expense (benefit):		
Federal	**2,471**	(283)
State	**145**	(34)
Total deferred expense (benefit)	**2,616**	(317)
Total income tax expense (benefit)	**$ 2,621**	$ (311)

A reconciliation of income tax expense (benefit) computed using the federal statutory rate to the income tax expense (benefit) in our consolidated statements of operations is as follows (in thousands):

Year ended December 31,	**2009**	2008
Tax computed at federal statutory rate	**$ (1,397)**	$ (314)
State taxes, net of federal benefit	**(66)**	(48)
Increase in tax from:		
Business meals and entertainment	**13**	15
Tax credits	**—**	23
Valuation allowance change	**4,064**	—
Other, net	**7**	13
Total income tax expense (benefit)	**$ 2,621**	$ (311)

Deferred tax assets are comprised of the following (in thousands):

December 31,	**2009**	2008
Accounts receivable	**$ 15**	$ 15
Inventories	**389**	643
Employee compensation and benefits	**622**	428
Amortization of intangibles	**327**	599
NOL and tax credit carryforwards	**24,169**	22,489
Severance and related cost accruals	—	36
Warranty accrual	**30**	47
Reserve for loss on sublease contract	**134**	—
Other, net	**57**	38
Deferred tax assets	**$ 25,743**	$ 24,295
Less, valuation allowance	**(25,743)**	(21,679)
Net deferred tax assets	**$ —**	$ 2,616

Deferred tax assets are classified in our consolidated balance sheet as follows (in thousands):

December 31,	**2009**	2008
Current assets	**$ —**	$ 127
Noncurrent assets	—	2,489
Total	**$ —**	$ 2,616

We record the benefit we will derive in future accounting periods from tax losses and credits and deductible temporary differences as “deferred tax assets,” which are included in the caption “Deferred income taxes” on our consolidated balance sheet. In accordance with Accounting Standards Codification (ASC) 740, “Income Taxes,” we record a valuation allowance to reduce the carrying value of our deferred tax assets if, based on all available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. At December 31, 2007, we had recorded a valuation allowance of approximately $21.7 million based on our assessment of the realizability of our deferred tax assets at that date. At December 31, 2008, we assessed the realizability of our deferred tax assets and the amount of our valuation allowance. We considered that business conditions had deteriorated late in 2008 and would likely continue to be weak through the first half of 2009. We also considered our cumulative profit over the previous three-year period and our future profit potential. Based on our assessment of these and other relevant factors, we determined that there was not sufficient positive or negative evidence to warrant an increase or decrease in the amount of the valuation allowance and that a valuation allowance of $21.7 million was appropriate at December 31, 2008.

Economic and semiconductor industry business conditions remained weak in the first half of 2009 and Aetrium incurred operating losses during this period. General economic and semiconductor industry conditions showed improvement in the second half of the year and Aetrium’s operating results improved such that our net sales increased to $5.7 million in the second half of 2009 compared with $2.9 million in the first half. Despite the improvement in sales in the second half of the year and our ongoing cost containment efforts, we incurred additional losses in the third and fourth quarters of the year that placed us in a three year cumulative loss position at December 31, 2009. Although we expect that general economic and semiconductor industry business conditions will likely continue to improve in 2010, we determined there was not sufficient positive evidence regarding our potential for future profits to outweigh the negative evidence of our three year cumulative loss position under the guidance provided in ASC 740. Therefore, we determined that our valuation allowance should be increased to $25.7 million to fully reserve our deferred tax assets at December 31, 2009. We expect to continue to maintain a full valuation allowance until we determine that we can sustain a level of profitability that demonstrates our ability to realize these assets. To the extent we determine that the realization of some or all of these benefits is more likely than not based upon expected future taxable income, a portion or all of the valuation allowance will be reversed. Such a reversal would be recorded as an income tax benefit and, for some portion related to deductions for stock option exercises, an increase in shareholders' equity.

Aetrium has federal net operating loss carryforwards of approximately $66 million that will begin to expire in 2020 if not utilized. We also have state net operating loss carryforwards of approximately $23 million that will expire at various times, beginning in 2010, if not utilized. We also have federal and state research tax credit and alternative minimum tax credit carryforwards of approximately $1.3 million that will expire at various times, beginning in 2013, if not utilized. The utilization of net operating loss carryforwards and research tax credit carryforwards may be subject to annual limitations in the event of future changes in ownership pursuant to the requirements of Section 382 of the Internal Revenue Code. Such limitations could result in the expiration of net operating loss and tax credit carryforwards before utilization.

Our federal and state operating loss carryforwards include windfall tax deductions from stock option exercises. In accordance with ASC 740, the amount of windfall tax benefit recognized in additional paid-in capital is limited to the amount of benefit realized currently in income taxes payable. As of December 31, 2009, Aetrium had suspended additional paid-in capital credits of $1.2 million related to windfall tax deductions. Upon realization of the net operating loss carryforwards from such windfall tax deductions, we would record a benefit of up to $1.2 million in additional paid-in capital.

We assessed our income tax positions at December 31, 2009 and 2008 for all years subject to examination and determined that our unrecognized tax positions were immaterial at those dates.

Aetrium is subject to income tax examinations in the U.S. federal and certain state jurisdictions. There are currently no income tax examinations in progress. Federal and state income tax returns are subject to review for fiscal years 2006 through 2009.

NOTE 13: PRODUCT LINE, GEOGRAPHIC, SIGNIFICANT CUSTOMER AND CONCENTRATION OF CREDIT RISK DATA

The following table sets forth the various components of net sales by product line as a percentage of total sales:

Year ended December 31,	**2009**	2008
Test handler products	**48%**	59%
Reliability test equipment products	**17**	15
Change kits and spare parts	**35**	26
Total	**100%**	100%

AETRIUM INCORPORATED

Notes to Consolidated Financial Statements

All of our long-lived assets are located in the United States. Sales by geographic area based on product shipment destination were as follows (in thousands):

Year ended December 31,	**2009**	2008
United States	**$ 1,896**	$ 2,625
Thailand	**2,661**	163
Philippines	**2,187**	3,017
Malaysia	**300**	7,986
Singapore	**944**	831
Other foreign countries	**661**	2,595
Total	**$ 8,649**	$ 17,217

Sales to customers comprising more than 10% of our total net sales and accounts receivable from customers comprising more than 10% of our total accounts receivable are summarized below:

	Percent of total sales for year ended December 31,		Percent of total accounts receivable as of December 31,	
	2009	2008	**2009**	2008
Customer A	**58%**	25%	**60%**	61%
Customer B	**20%**	40%	**35%**	*
Customer C	*	11%	*	*
Customer D	*	*	*	14%

* Percent was less than 10% of the total.

We sell our products principally to manufacturers of integrated circuits. Our accounts receivable balance is concentrated with customers principally in one industry. We regularly monitor the creditworthiness of our customers to manage this collection risk. A reduction, delay or cancellation of orders from one or more of these significant customers, or the loss of one or more of these customers, would likely have a significant adverse impact on our operating results.

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.

AETRIUM INCORPORATED

Date: March 30, 2010

By: /s/ Joseph C. Levesque
Joseph C. Levesque
Chief Executive Officer
(principal executive officer)

By: /s/ Paul H. Askegaard
Paul H. Askegaard
Treasurer
(principal financial and accounting officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on March 30, 2010 by the following persons on behalf of the registrant and in the capacities indicated.

Signature	Title
/s/ Joseph C. Levesque Joseph C. Levesque	Chairman of the Board
/s/ Darnell L. Boehm Darnell L. Boehm	Director
/s/ Terrence W. Glarner Terrence W. Glarner	Director
/s/ Daniel A. Carr Daniel A. Carr	Director
/s/ Charles B. Westling Charles B. Westling	Director
/s/ John J. Pollock John J. Pollock	Director
/s/ Douglas L. Hemer Douglas L. Hemer	Director

AETRIUM INCORPORATED
EXHIBIT INDEX TO ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009

Item No.	Item	Method of Filing
3.1	Our Restated Articles of Incorporation, as amended.	Incorporated by reference to Exhibit 3.1 to our Registration Statement on Form SB-2 (File No. 33-64962C).
3.2	Amendment to Restated Articles of Incorporation	Incorporated by reference to Exhibit 3.2 to our Quarterly Report for the quarter ended September 30, 1998 (File No. 0-22166).
3.3	Our Bylaws, as amended.	Incorporated by reference to Exhibit 3.1 to our Form 8-K dated October 20, 2009 (File No. 0-22166).
4.1	Specimen Form of our Common Stock Certificate.	Incorporated by reference to Exhibit 4.1 to our Registration Statement on Form SB-2 (File No. 33-64962C).
10.1	Employment Agreement dated April 1, 1986, between Joseph C. Levesque and us.	Incorporated by reference to Exhibit 10.6 to our Registration Statement on Form SB-2 (File No. 33-64962C).
10.2	Standard Industrial/Commercial Single-Tenant Lease, dated September 18, 1998, between W.H. Pomerado, LLC and us, including addendum and material exhibits to lease.	Incorporated by reference to Exhibit 10.16 to our Annual Report on Form 10-K for the year ended December 31, 1999 (File No. 0-22166).
10.3	2003 Stock Incentive Plan.	Incorporated by reference to Exhibit 10.18 to our Annual Report on Form 10-K for the year ended December 31, 2002 (File No. 0-22166).
10.4	Form of Change of Control Agreement.	Incorporated by reference to Exhibit 10.19 to our Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 0-22166).
10.5	Form of Amendments to Change of Control Agreement	Incorporated by reference to Exhibit 10.18 to our Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 0-22166).
10.6	Sales Incentive Program.	Incorporated by reference to Exhibit 10.21 to our Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 0-22166).

10.7	Commercial Lease dated February 24, 2006 between Kamko I, LLC and us.	Incorporated by reference to Exhibit 10.24 to our Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 0-22166).
10.8	Asset Purchase Agreement, dated December 28, 2006, between WEB Technology, Inc. and us.	Incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K dated January 5, 2007 (File No. 0-22166).
10.9	Executive Officer Profit Sharing Program.	Incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K dated January 23, 2007 (File No. 0-22166).
10.10	Business Loan Agreement, dated December 3, 2009, between Bremer Bank and us.	Filed herewith electronically.
10.11	Note, dated December 3, 2009, issued by us to Bremer Bank.	Filed herewith electronically.
14.1	Code of Business Conduct and Ethics.	Incorporated by reference to Exhibit 14.1 to our Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 0-22166).
21.1	Subsidiaries of the Registrant.	Incorporated by reference to Exhibit 21.1 to our Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 0-22166).
23.1	Independent Registered Public Accounting Firm's Consent.	Filed herewith electronically.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith electronically.
31.2	Certification of Chief Administrative Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith electronically.
31.3	Certification of Treasurer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith electronically.
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Filed herewith electronically.

SCHEDULE II

Valuation and Qualifying Accounts

Description	Balance at beginning of year	Additions: Charged (credited) to costs and expenses	Additions: Charged to other accounts	Deductions	Balance at end of year
Allowance for doubtful accounts:					
2008	$ 46	$ (6)	$ 0	$ 0	$ 40
2009 (1)	40	(4)	0	(4)	40
Inventory excess and obsolescence reserve (2):					
2008	$ 1,760	$ 0	$ 0	$ (198)	$ 1,562
2009	1,562	155	0	(817)	900
Valuation allowance on deferred tax assets:					
2008	$ 21,679	$ 0	$ 0	$ 0	$ 21,679
2009	21,679	4,064	0	0	25,743

(1) Deduction represents recovery of account previously written off.

(2) Deductions represent disposals of reserved inventory.

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Corporate Information

Board of Directors

Joseph C. Levesque
Chairman of the Board,
and Chief Executive Officer,
Aetrium Incorporated

Darnell L. Boehm
Principal of
Darnell L. Boehm & Associates

Terrence W. Glarner
President,
West Concord Ventures, Inc.

Daniel A. Carr
President,
The Collaborative

Charles B. Westling
Business Advisor

John J. Pollock
President,
Aetrium Incorporated

Douglas L. Hemer
Chief Administrative Officer
and Secretary,
Aetrium Incorporated

Corporate Management

Joseph C. Levesque
Chairman and Chief
Executive Officer

John J. Pollock
President,

Douglas L. Hemer
Chief Administrative Officer and
Secretary

Daniel M. Koch
Vice President, Worldwide Sales

Paul H. Askegaard
Treasurer

Timothy G. Foley
Vice President, Manufacturing

Dean K. Hedstrom
Vice President, Technology

Timothy A. McMullen
Vice President, Reliability Test
Systems

W. Charles Sletten, II
Vice President, Engineering

Investor Information

Independent Registered Public Accounting Firm
Grant Thornton LLP
Minneapolis, MN

Legal Counsel
Oppenheimer Wolff & Donnelly LLP
Minneapolis, MN

Stock Listing
NASDAQ symbol: ATRM

Transfer Agent and Registrar
Computershare Trust Company
Golden, Co
303-262-0600

Principal Market Makers
Knight Equity Markets
Feltl & Company
UBS Securities
Citigroup Global Markets

Annual Meeting

The annual meeting of shareholders of Aetrium Incorporated will be held on Wednesday, May 19, 2010 at 4:00 p.m. at Aetrium's Corporate Headquarters, 2350 Helen Street, North St. Paul, MN.

Aetrium Incorporated

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N A S D A Q : **A T R M**