ARRHYTHMIA RESEARCH TECHNOLOGY INC /DE/
Form 10-K
April 26, 2012

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

FORM 10-K

x Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2011
o Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
001-9731
(Commission file number)
ARRHYTHMIA RESEARCH TECHNOLOGY, INC.
(Name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation of organization)	72-0925679 (IRS Employer Identification Number)
25 Sawyer Passway, Fitchburg, MA (Address of principal executive offices)	01420 (Zip Code)
(978) 345-5000 (Registrant's telephone number)	

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Securities Registered pursuant to Section 12 (b) of the Act:	
Common Stock, $.01 par value (Title of Each Class)	NYSE AMEX (Name of each exchange on which registered)
Securities Registered pursuant to Section 12 (g) of the Act:	
None	

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 if the Securities Act. Yes o No x
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 o No x
Indicate by check mark whether the registrant (1) filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o
Indicate by check mark if disclosure of delinquent filers in response 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. o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site if any, every interactive data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):
Large Accelerated filer o Accelerated filer o Non-Accelerated filer o Smaller reporting company x
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant’s most recently completed second fiscal quarter. $10,156,829.

On April 17, 2012, there were 2,790,514 shares of the issuer's common stock, par value $.01, outstanding, which is the only class of common or voting stock of the issuer.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 31, 2011. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

Arrhythmia Research Technology, Inc.

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PART I

Item 1. BUSINESS

OVERVIEW

Arrhythmia Research Technology®, Inc., a Delaware corporation ("ART"), through its wholly owned subsidiaries (collectively with its subsidiaries, the “Company”) has three operating business segments. Its wholly-owned Massachusetts subsidiary, Micron Products®, Inc. (“Micron”) and its division Micron Integrated Technologies® (“MIT”) comprise the Company's Medical Electrode Components and Plastic Molding segment, which segment is the Company's primary source of revenue. ART's wholly-owned Delaware subsidiary, RMDDxUSA Corp. (“RMDDxUSA”), and its Prince Edward Island, Canada, subsidiary, RMDDx Corporation (“RMDDx” and collectively with RMDDxUSA, referred to herein as “WirelessDx”) comprise the Company's developing Medical Monitoring Services segment. Through its Computerized Medical Instruments segment, ART is engaged in licensing signal-averaging electrocardiographic (SAECG) software, the PREDICTOR® series. A fourth segment, Corporate, tracks expenses of the public holding company.

Medical Electrode Components and Plastic Molding Segment

Micron is a manufacturer and distributor of silver plated and non-silver plated conductive resin sensors ("sensors") used in the manufacture of disposable integrated electrodes constituting a part of electrocardiographic diagnostic and monitoring instruments. Micron also is a distributor of metal snap fasteners ("snaps"), another component used in the manufacture of disposable electrodes. A conductive resin snap is manufactured for applications where the presence of metal is not desirable. The sensors are a critical component of the signal pathway in many different types of disposable electrodes. For example, the disposable electrodes used to capture the electric impulses of the heart and enable the analysis of late potentials require sensors which provide for an accurate, low noise signal to be transmitted to the monitoring device. Micron also manufactures and sells or leases electrode assembly machines to its sensor and snap customers.

Figure 1: Schematic of Integrated ECG Electrode

Micron is one of a few companies providing silver / silver-chloride sensors to the global medical device industry. Micron’s customers manufacture monitoring and transmitting electrodes which are utilized in a variety of bio-feedback and bio-stimulation applications including, among many others, electrocardiograms (ECG’s), electroencephalograms (EEG’s), electro-muscular stimulation (EMS), and thermo-electrical neural stimulation (TENS). Micron also produces high volume precision plastic products. These high volume products leverage the production skills for the resin sensors while providing a diversification from the dependence on a single product line. The MIT division formed in January 2006, specializes in the production of metal and plastic components and assemblies for the medical and defense industries. In 2009, in order to better leverage the high quality manufacturing of its New England Molders ("NEM") division’s plastic production capacity and its Leominster Tool Division’s (“LTD”) metal machining capabilities, Micron began marketing these divisions as a complete source of custom manufacturing. The custom manufacturing arm of Micron, MIT provides its customers with a comprehensive portfolio of value-added manufacturing, design and engineering services, and complete product life cycle management: from concept to product development, prototyping, and volume production.

In 2010, MIT's tool making capabilities and excess capacity were leveraged into the creation of a manufacturing cell dedicated to the production of patient specific Orthopedic implants. In order to compete with high production standard implants, the innovative cell achieved high production efficiency while manufacturing single unique implants

designed for individual patients. Each unique implant, whether cut from bar stock or from a casting, is machined, polished, and passivated (coated) on site. After laser marking the serial number, a computer controlled inspection machine measures the surface, ensuring the one of a kind implant meets the specifications of the customer.

Medical Monitoring Services Segment

WirelessDx is a medical diagnostic service company acquired by the Company in June 2010 and is dedicated to medical information technology, medical diagnostics and patient monitoring through wireless, internet and telecommunication technologies. WirelessDx offers advanced medical diagnostic systems and technologies that enable health care providers to monitor patients twenty four hours a day seven days a week. This service utilizes cellular and other wireless communication devices worn by the patient to capture biometric data and transmit it remotely. The data is then processed by company technicians using cloud based software. WirelessDx technicians analyze the patient data twenty four hours a day seven days a week and transmit this analysis report as prescribed by physicians through WirelessDx's secure web portal. WirelessDx is an IDTF (Independent Diagnostic Testing Facility) and reported its first revenues in the fourth quarter of 2010.

Computerized Medical Instruments Segment

ART's SAECG software, PREDICTOR®, analyzes electrical impulses of the heart to aid in the detection of potentially lethal arrhythmias. The SAECG product is currently used in a National Institutes for Health ("NIH") funded investigation into "Risk Stratification in MADIT II Type Patients". At the completion of this study and assuming favorable study results, ART expects to establish additional licensing contracts with original equipment manufacturers for this product. See "Products and Services--Computerized Medical Instruments Segment--Signal-Averaging Electrocardiographic (SAECG) Products--PREDICTOR" for further information.

Sudden cardiac death afflicts over 300,000 individuals in the United States each year. The majority of sudden cardiac deaths are due to sustained ventricular tachycardia (abnormally rapid heartbeat) or ventricular fibrillation (very fast, completely irregular heartbeat). The presence of ventricular late potentials may indicate a risk of life-threatening ventricular arrhythmias. The SAECG process enables late potentials to be amplified and enhanced, while eliminating undesired electrical noise, allowing for clinical interpretation of that risk. Rather than having a direct sales force, ART's efforts are focused on marketing ART's product through licensing to original equipment manufacturers. In 2010 ART completed conversion of the software to a customizable modular version and entered into a multi-year software license agreement with Nihon Khoden for a customized version of the software.

PRODUCTS AND SERVICES

The following table sets forth for the periods specified, the revenue derived from the products and services of the Company's segments:

	Year Ended December 31,					
	2011		%	2010		%
Medical Electrode Components and Plastic Molding	$24,123,170	99	%	$23,051,853	99	%
Medical Monitoring Services	133,203	1		4,920	—	
Computerized Medical Instruments	—	—		302,510	1	
Total	$24,256,373	100	%	$23,359,283	100	%

Medical Electrode Components and Plastic Molding Segment

Medical Electrode Components (Sensors and Snaps)

Micron is a manufacturer and distributor of silver-plated and non-silver plated conductive resin sensors for use in the manufacture of disposable electrodes for ECG diagnostic, monitoring and related instrumentation. The type of sensor manufactured by Micron consists of a molded plastic substrate plated with a silver / silver chloride surface, which is a highly sensitive conductor of electrical signals. Silver / silver chloride-plated disposable electrodes are utilized in coronary care units, telemetry units, and for other monitoring purposes. In addition to the traditional ECG tests, disposable electrodes incorporating Micron's sensors are used in connection with stress tests, Holter monitoring, event recorders, and mobile cardiac telemetry.

Micron also manufactures sensors and conductive plastic studs used in the manufacture of radio translucent electrodes. The radio translucent conductive plastic studs are manufactured with uniquely engineered resin to enable electrical conductivity between the sensor and the recording instrument without the use of a metal snap. The radio translucent electrodes are virtually invisible to X-rays and are preferred in some medical environments such as nuclear medicine, cardiac catheterization laboratories, and certain stress procedures. Micron also manufactures the mating conductive resin snaps, which replace traditional metal snap fasteners in the radio translucent applications. These sensors and snaps have undergone testing and received a MR-Conditional certification in accordance with the American Society for Testing and Materials (ASTM) designations F2052-06e1, F2182-09 and F2119-07 from a licensed, accredited, independent testing laboratory.

Other custom designed sensors are manufactured for specific unique applications in the EEG, EMG or TENS markets. Recent growth in the volume of highly engineered EEG sensors reflects the increasing demand for non-invasive measuring of neurological impulses. Micron's strength in design and low cost manufacturing enables customers to grow into unique niche medical applications and electrophysiological monitoring with custom designed sensors.

Metal snap fasteners are used as an attachment and conductive connection between the disposable electrode and the lead wires of an ECG machine. As a complementary product, Micron purchases the metal snap fasteners for resale from multiple suppliers and performs additional quality assurance tests, repackages and stocks these snap fasteners for its customers who purchase the snaps in conjunction with Micron's sensors.

High Volume Precision Molded Products

Micron also sells high volume precision custom molded component parts. Sales of these high volume molded products diversify the Company's existing product lines while utilizing previously unused manufacturing capacity. To defray the customer's upfront tooling costs and remain competitive with global competition, some high volume customers require the financing of a customer specific tool over several years. The cost of the tool is guaranteed by the customer and repaid over time as the customer's molded product is shipped.

Other Plastic Molding and Services

Custom Injection Molding

The diversification of custom molding has increased production flexibility and dramatically expanded the capability to produce an increased size and complexity of products. From consumable medical products to medical equipment components, the MIT division has decreased Micron's dependence on sensor production for manufacturing growth. In order to leverage the division's thermoplastic injection molding capabilities, the division has expanded into other value added services including packaging, assembly with outsourced and internally produced metal components, clean room manufacturing, and specialty coatings.

Injection Molding Tooling

The design, manufacture, and rehabilitation of injection molding tools for the customer is part of the service package provided by the MIT division. The division also provides cost savings to Micron by vertically integrating mold making and repair into the structure of Micron's sensor and custom injection molding businesses. The Company's engineers and mold designers work with customers' product development engineers to design and produce unique tooling for their products. MIT's expertise in cost effective manufacturing creates a sustainable partnership with the customers as prototyped parts move to full scale production. The design and manufacture of tooling is a leading indicator of future product revenue. The division continues to generate revenues from other customers for similar industrial applications such as metal die casting molds, investment casting wax molds, and thermoplastic injection/extrusion blow molds.

Custom Manufactured Metal Medical Devices

A climate controlled medical machining cell was built for the custom computer aided design and computer controlled metal machining of patient specific orthopedic medical device components. The manufacturing space includes a machine programming office with the latest technology in computer programming for 5-axis machining with Computer Numerical Controlled (CNC) vertical milling machines and a state of the art 5-axis machining center. These products involve complex machining of wrought and cast cobalt-chromium-molybdenum alloy as well as high molecular weight polymers into unique customized products. The expansion into production of unique custom sized castings together with greater finishing capabilities has increased the breadth of the patient specific market, while reducing the cost to compete with nonspecific production implants. The achievement of complex curved machined surfaces on high molecular weight polymers has completed MIT's ability to deliver a complete implant kit. No two components are identical and require precision manufacturing verified by complex computer controlled automated coordinate measuring equipment that measure up to 25 points per square inch. Additional capabilities added to the cell include laser marking, passivation, automated polishing, stereolithography, and ultra-sonic cleaning. Lean initiatives have increased capacity to accommodate a significant increase in production before reaching any physical constraints.

Medical Monitoring Services Segment

WirelessDx provides a continuous cardiac outpatient monitoring service. The monitoring service is designed to deliver relevant and timely clinical reports to the prescribing physician regarding a patient's cardiac condition. The service is delivered using Food and Drug Administration ("FDA") cleared ECG software, medical devices provided by third parties, a wireless data network, and a twenty-four hour seven day a week monitoring service center. For mobile cardiac telemetry and event monitoring services, the patient wears a convenient single device attached to electrodes that capture, analyze and transmit the ECG data via a wireless modem to the WirelessDx monitoring center. The physicians are then able to access patient information using a proprietary internet-based report delivery system. The monitoring centers are staffed with certified ECG technicians and trained patient call center operators. Payment for services are primarily received from Medicare and third party commercial payers.

Computerized Medical Instruments Segment

Signal-Averaging Electrocardiographic (SAECG) Products - PREDICTOR®

In early 2010, ART successfully converted its proprietary signal-averaged electrocardiography (SAECG) software, PREDICTOR, that previously operated on a single hardware based electrocardiogram acquisition platform, ART 1200-EPX, to a customizable modular software product that is compatible with a variety of hardware platforms. The conversion allows PREDICTOR to be used with customer-specific electrocardiogram acquisition equipment to generate the signal-averaged ECG analysis. The software can be customized to interface with a variety of Original Equipment Manufacturer ("OEM") hardware. OEM customers can license PREDICTOR and bundle it with other cardiac diagnostic software packages incorporated in their acquisition equipment.

PREDICTOR utilizes the unique, patented and proprietary algorithms which have been defined as the "Standard" by the joint AHA/ACC/ESC task force on Signal-Averaging Electrocardiography[1]. The SAECG methodology used in PREDICTOR is compliant with the Standards for Late Potential Analysis set by the European Society of Cardiology, the American College of Cardiology and the American Heart Association. PREDICTOR is also capable of incorporating additional signal processing capabilities included in ART's software library for clinical research. This library includes IntraSpect, a module that permits detection of ventricular late potentials in patients with bundle branch block, P-wave signal averaging, which helps predict patients at risk for atrial fibrillation, and a heart rate variability module.

PREDICTOR is currently being used in a NIH funded investigation into "Risk Stratification in MADIT II Type Patients". The primary objectives of this study are: 1. To evaluate the predictive value of a multivariate model consisting of pre-specified clinical and ECG parameters for predicting arrhythmic events in Multicenter Automatic Defibrillator Implantation Trial II ("MADIT II") type post-infarction patients; 2. To develop a multivariate risk-stratification model, based on a broader spectrum of pre-specified clinical covariates and ECG parameters, and from it a risk-scoring algorithm identifying high-risk and low-risk patient groups; this algorithm will be validated by a cross-validation study. Such an algorithm will enable an ordering of patients who may benefit most, and benefit least, from implantable cardiac defibrillator ("ICD") therapy. Results from this investigation are expected in 2012.

Customers and Sales

During the year ended December 31, 2011, Micron had one major customer which accounted for over 10% of the Company's sales and a loss of this customer may have a material adverse effect on the Company's results. The three largest customers accounted for 34%, 8%, and 7% of sales in 2011 as compared to 29%, 13%, and 11% of sales for the year ended December 31, 2010.

Micron manufactures its sensors against purchase orders from electrode manufacturers. The Company is aware of approximately 20 significant manufacturers of disposable snap type, radio translucent and pre-wired electrodes worldwide. Micron sells its sensors to most of these manufacturers. Sales backlog is not material to Micron's sensor business due to the method of ordering employed by its customer base in this competitive industry. Customers generally purchase on a single purchase order basis without long-term commitments.

The majority of the MIT divisions' customers for injection molded thermoplastic products are from the medical equipment, medical device and defense industries. From single use medical or defense consumable products to equipment components, the engineered production services provide quality design and production capabilities which exceed the customers' manufacturing requirements. Certain customers require that an inventory of their products be maintained at all times to enable just in time delivery schedules. A commitment from customers is required by MIT to maintain the higher level of finished goods inventory and raw material required for their products. These agreements allow for a more flexible manufacturing schedule with longer, more cost effective production cycles. MIT's primary target customer is a company with a medical product or device, defense related contractor, manufacturer, or development company with a need for complete product life cycle management from design to full production preferably combining multiple manufacturing technologies such as plastic injection molding, metalworking, assembly, and packaging.

The following table sets forth, for the periods indicated, the consolidated revenues and percentages of revenues derived from the sales of all of the Company's products and services in its geographic markets:

	Revenues for the Years Ended December 31,					
	2011		%	2010		%
United States	$9,558,299	39	%	$12,492,883	54	%
Canada	8,182,587	34		5,468,392	23	
Europe	2,394,415	10		2,290,821	10	
Pacific Rim	2,122,261	9		2,085,161	9	
Other	1,998,811	8		1,022,026	4	
Total	$24,256,373	100	%	$23,359,283	100	%

While some risks exist in foreign markets, the vast majority of the Company's customers are based in historically stable markets. To reduce the risks associated with foreign shipment and currency exchange fluctuations, the title to

most of the products are transferred to the customers when shipped, and payment is required in U.S. Dollars. Increases in Canada were due to higher volumes of sensors and conductive snaps. Decreases in the United States were the result of the previously announced completion of a defense industry program and lower demand for other defense industry products.

(1) AHA/ACC/ESC Policy Statement: "Standards for the Analysis of Ventricular Late Potentials Using High Resolution or Signal-Averaged Electrocardiography: A Statement by a Task Force Committee of the European Society of Cardiology, the American Heart Association and the American College of Cardiology. JACC Vol. 17, No. 5, April 1991:999-1006

To help offset the risk from fluctuations in the market price of silver, sensor customers have generally been subject to a silver surcharge or discount based on the market price of silver at the time of shipment. The Company is sensitive to the impact of recent increases in silver cost, and continues to explore options with the sensor customers to help mitigate the resulting increases in surcharges.

Marketing and Competition

Micron sells its sensors to large, sophisticated OEM manufacturers of disposable snap type and radio translucent ECG electrodes who compete internationally in the electrode market against other OEM manufacturers as well as manufacturers of tab-type electrodes. The Company has one major domestic competitor in the sensor market along with an increasing number of minor competitors worldwide. The sensor and snap market is extremely price sensitive and barriers to entry are relatively low. The Company competes with respect to its sensor products on the basis of pricing, technical capabilities, quality of service and ability to meet customer requirements. With no import restrictions, the Company's foreign competitors with excess capacity can be expected to expand sales in the U.S.

The Company markets Micron and its MIT division as a highly specialized custom injection thermoplastic molder to new and existing customers. The Company believes it competes effectively based on its expertise in low cost manufacturing of high volume precision products. The complex medical and defense industry products manufactured by the MIT division have expanded the existing customer base and extensively diversified the product mix. It is the Company's intention to continue these efforts to market to the expanded customer base and further diversify the product offerings. Global competition creates a highly competitive environment. To meet this challenge, the MIT division focuses its product development efforts on complex engineered products with specialty material requirements not readily outsourced to offshore manufacturing. Micron's ISO 13485:2003 and ISO 9001:2008 registrations, the international quality standards for medical devices and manufacturing, qualifies the Company to further expand into medical products. The Company's International Traffic in Arms Regulation (ITAR) registration with the US State Department allows the Company to compete in defense applications restricted by export controls and the Department of Defense.

WirelessDx has focused its marketing efforts on medical service providers who would benefit from wireless patient monitoring technologies. In 2011, the Veterans Administration of Lexington, Kentucky contracted WirelessDx for cardiac event monitoring and mobile cardiac telemetry services. WirelessDx competes with other IDTF providers on the basis of ease of use and reliability of monitoring services, quality of data, customer support, reporting capabilities, relationships with referring physicians, hospitals and other third parties as well as perceived value. The number of competitors, many of whom are well established, continues to grow as the monitoring market changes with the acceptance of new methods and technologies to reduce costs while improving outcomes.

Management continues to pursue licensing arrangements for ART's proprietary signal-averaged electrocardiography (SAECG) software, PREDICTOR, to additional Original Equipment Manufacturers for integration into existing cardio diagnostic equipment. As previously stated, the SAECG product is currently used in a NIH funded investigation into "Risk Stratification in MADIT II Type Patients". ART's research and development efforts include expanding PREDICTOR's diagnostic capability beyond SAECG analysis.

Product Suppliers and Manufacturing

Micron manufactures its sensors at its Fitchburg, Massachusetts facilities employing a proprietary non-patented multi-step process. All employees sign confidentiality agreements to protect this proprietary process. The raw materials used by Micron are plastic resins used to mold the substrates and silver-silver chloride chemical solutions for plating the molded plastic substrates. Both the resins and the chemicals involved in the silver-silver chloride process are available in adequate supply from multiple commodity sources. As insulation against unanticipated price increases, some resins and chemicals used in the production of sensors are purchased in large quantities to lower or stabilize prices.

Resins used by the MIT division are purchased for an individual customer order, with most increases in resin costs passed on to the customer as orders are acknowledged. Because the customer order determines the quantity of material required, customers may, and have, guaranteed the purchase of specific large quantities of product which allows the division to purchase raw material at a more favorable cost thereby lowering the final cost to the customer. The metal alloys are subject to the same customer order limitations and prices are fixed as the customer

guarantees an order.

Micron distributes medical grade nickel-plated brass and stainless steel snap fasteners purchased from multiple domestic and international sources. Micron buys these snaps in bulk, performs additional quality assurance tests, and stocks inventory to facilitate just-in-time shipments to its customers. This business segment has decreased significantly in revenue as price pressure has forced metal snap customers to buy direct from the manufacturer to remain competitive.

Micron's 116,000 square foot manufacturing facilities are International Traffic in Arms Regulation (ITAR) and FDA registered. Micron is ISO 13485:2003 and 9001:2008 registered. Micron's injection molding machine capacity ranges from 15 to 300 tons and includes a clean room capable of class 10,000 molding and assembly for products and processes sensitive to environmental particulates. In addition, these facilities include a climate-controlled space for the manufacture of metal medical devices utilizing the latest in 5-axis CNC technology.

WirelessDx's service offerings use a third party data network for transmission of physiological data to WirelessDx's monitoring centers and monitoring devices available from multiple sources. There are multiple companies offering this service with certain redundancies in data networks.

Inventory Requirements

Larger customers benefit from Micron's ability to maintain an inventory of standard sensors and snaps. This inventory allows for predictable and planned production resulting in cost efficiencies that help to offset price erosion in the marketplace.

The MIT division's custom manufactured products are completed on an order by order basis. Finished goods inventory is product made in advance of an acknowledged sales order, part of an annual blanket order quantity, or for a specific safety stock requested by the customer.

WirelessDx's service requires it to provide medical monitoring devices for use in the collection, transmission, analysis, and storage of physiological data. These devices are commercially available from multiple sources although switching between providers would add inefficiency and cost to the service offerings.

Research and Development

In 2011 and 2010, Micron's research and development efforts resulted in $188,478 and $158,596 of expense, respectively. These efforts include the development of a unique process to eliminate certain hazardous materials from the manufacturing processes, a new provisional patent application for a new multiple material sensor, and the design and testing of specific process improvements. The 2010 expense included $24,065 for the impairment of equipment used for final product testing.

In 2011 and 2010, WirelessDx's research and development efforts resulted in $53,265 and $0 of expense, respectively. These efforts included improvements to the proprietary internet-based physician report delivery system.

ART's research and development efforts have focused primarily on maintaining the software library in the SAECG product lines in a compatible platform and include expanding PREDICTOR's diagnostic capability beyond SAECG analysis. The Company continues to provide technical support to the NIH's research project utilizing ART's software. Included in this expense is development work to verify the integrity of the analytical algorithms, and improve the stability and ease of customization of the software to be compatible with various hardware and software platforms. For the fiscal years ended December 31, 2011 and 2010, ART had research and development expenses of approximately $219,482 and $95,905, respectively. ART expects these expenses to grow as the software is improved and expanded.

Patents and Proprietary Technology

Micron employs a highly complex, proprietary non-patented multi-step manufacturing process for its silver / silver chloride-plated sensors. To maintain trade secrets associated with the manufacture of disposable electrode sensors, all employees are required to sign non-disclosure and/or non-competition agreements. Micron uses a patented material in the production of some sensors. Micron paid $3,745 in 2011, and $4,759 in 2010 in royalties associated with this patent.

ART acquired patents related to time and frequency domain analysis of electrocardiogram. These technologies are utilized in the current version of PREDICTOR. In March 1997, the U.S. Patent Office granted United States Patent No. 5,609,158 entitled "Apparatus and Method for Predicting Cardiac Arrhythmia, by Detection of Micropotentials and Analysis of all ECG Segments and Intervals" which covers a frequency domain analysis technique for SAECG data. The Company believes that ART's products do not and will not infringe on patents or violate proprietary rights of others. In the event that ART's products infringe patents or proprietary rights of others, ART may be required to modify the design of its products or obtain a license. There can be no assurance that ART will be able to do so in a timely manner upon acceptable terms and conditions. In addition, there can be no assurance that ART will have the financial or other resources necessary to enforce or defend a patent infringement or proprietary rights violation

action. Moreover, if ART's products infringe patents or proprietary rights of others, ART could, under certain circumstances, become liable for damages, which could have a material adverse effect on earnings.

Government Regulation

Micron’s sensor elements are components used in medical devices designed and manufactured by original equipment manufacturers. As such, these elements are not required to be listed with regulatory agencies and do not require regulatory clearance for distribution. However, because Micron primarily distributes sensors to manufacturers for use in finished medical devices, Micron exercises as stringent controls over its manufacturing processes and finished products as would be required if the sensors were considered medical devices.

The MIT division manufactures parts for invasive medical devices, components for medical equipment, patented disposable medical laboratory products, and patented military applications. Customers own the product designs and are, therefore, subject to FDA, Department of Defense and EU regulations. While such products are a part of a medical device or other regulated equipment, customers are the regulated entity for the clearance of those products. MIT exercises stringent controls over all their manufacturing operations and complies with any special controls required by their customers.

Healthcare services in the United States are heavily regulated and major reforms of federal healthcare regulation are being implemented in each of the coming years through the end of 2014. In 2011, RMDDxUSA enrolled as an IDTF, which is defined by the Centers for Medicare and Medicaid Services (“CMS”) as an entity independent of a hospital or physician's office in which diagnostic tests are performed by licensed or certified non-physician personnel under appropriate physician supervision. Medicare has set certain performance standards that every IDTF must meet in order to obtain or maintain their billing privileges. WirelessDx provides both regulated and unregulated monitoring services utilizing devices and software that require marketing approval from the FDA. Current service offerings utilize FDA approvals secured by third party vendors of the component software and diagnostic monitoring devices. Regulated services provided by WirelessDx must comply with Local and National Coverage Determinations issued by the Centers for Medicare and Medicaid Services as well as the so called "Stark laws" prohibiting physician self referral of Medicare or Medicaid patients and the related Anti-kickback statute (42 U.S.C. § 1320a-7b(b)). Both regulated and unregulated services must comply with federal laws including Health Insurance Portability and Accountability Act (HIPAA), Health Information Technology for Economic and Clinical Health Act (HITECH), and Federal Communications Commission (FCC) regulations regarding data transmissions and interstate electronic commerce. WirelessDx currently operates a service center in the Canadian province of Prince Edward Island. To the extent that technology, information, personnel and economic activity occurs outside the United States, these operations are governed by and managed in compliance with U.S. International Traffic in Arms Regulations (ITAR) and Foreign Corrupt Practices Act (FCPA) laws and regulations.

ART’s software products are subject to, and ART believes currently comply with, material clearance and distribution requirements from governmental regulatory authorities, principally the FDA and the European Union (EU) equivalent agency. These agencies promulgate quality system requirements under which a medical device is to be developed, validated and manufactured. The development of the product line will be managed in accordance with applicable regulatory requirements.

Environmental Regulation

Micron’s operations involve use of hazardous and toxic materials and generate hazardous, toxic and other wastes. Its operations are subject to federal, state and local laws and regulations governing the use, storage, handling and disposal of such materials and certain waste products. Although management believes that the safety procedures for using, handling, storing and disposing of such materials comply with these standards required by state and federal laws and regulations, the Company cannot completely eliminate the risk of accidental contamination or injury from these materials.

Since its inception, Micron has expended significant funds to train its personnel, install waste treatment and recovery equipment and to retain an independent environmental consulting firm to regularly review, monitor and upgrade its air and waste water treatment activities. Management continues to evaluate and test many possible technological advances that reduce or eliminate the need for and use of hazardous materials in the manufacturing processes. The acquisition of equipment to eliminate a hazardous chemical from the process further emphasizes the commitment to the reduction and elimination of certain hazardous processes. Costs of compliance are not currently material to the Company’s operation. Micron believes that the operation of its manufacturing facility is in compliance with currently

applicable safety, health and environmental laws and regulations.

EMPLOYEES

As of December 31, 2011, the Company had 116 full-time and 16 part-time employees, most of which are employed in the Medical Electrode Components and Plastic Molding segment. The Company's employees are not represented by a union, and the Company believes its relationship with its employees is satisfactory.

PERIODIC REPORTING AND FINANCIAL INFORMATION

The Company registered its common stock under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and has reporting obligations, including the requirement that we file annual and quarterly reports with the Security and Exchange Commission ("SEC"). The public may read and copy materials the Company files with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549, on official business days during the hours of 10:00 am to 3:00 pm. You may obtain information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov. The Company also makes available through its website the annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports as soon as reasonably practical after filing with the SEC. Its website address is http://www.arthrt.com.

Item 1A. RISK FACTORS

In addition to the other information in this Form 10-K, the following factors should be considered in evaluating the Company and its business. The risks and uncertainties described below are not the only ones facing the Company. Additional risks and uncertainties that the Company does not presently know or currently deems immaterial may also impair the Company's business, results of operations and financial condition.

The Company's operating results may fluctuate significantly as a result of a variety of factors.

The Company's operating results may fluctuate significantly in the future as a result of a variety of factors, many of which are outside of our control. These factors include:

- the ability to maintain the pricing model, primarily for medical electrode sensors and/or decrease the cost of sales;
- the ability to increase sales of higher margin products and services;
- variations in the mix of products and services sold;
- the level of demand for our products and services and those that the Company may develop or acquire;
- volatility in commodity and energy prices and the ability to offset higher costs with price increases;
- variability of customer delivery requirements;
- the ability to successfully market WirelessDx services, manage the timing of investment in operational infrastructure, ability to accelerate the pace of revenues from customer implementation, and fund the expansion of this operation;
- a stable interest rate market and/or a stable currency rate environment in the world and specifically the countries where the Company is doing or plan to do business;
- continued availability of supplies or materials used in manufacturing at competitive prices;
- the amount and timing of investments in capital equipment, sales and marketing, engineering and information technology resources;
- the ability to license our software, provide timely customization and updates;
- adverse regulatory developments in the U.S. or any other country the Company plans to do business in;
- entrance of competitive products and services in the Company's markets;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- no adverse publicity related to the Company and/or its products and services;
- no adverse claims relating to the Company's intellectual property;
- adoption of new, or changes in, accounting principles;
- adverse regulatory developments specifically healthcare policy changes, environmental regulations and other regulatory changes;
- the costs inherent with complying with statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002;
- the ability to efficiently integrate future acquisitions and other new lines of business that the Company may enter in the future, if any; and
- general economic conditions.

As a strategic response to changes in the competitive environment, the Company may from time to time make certain pricing, service, technology or marketing decisions or business or technology acquisitions that could have a material adverse effect on the quarterly and annual results. Due to all of these factors, the operating results may fall below the expectations of stockholders and investors in any future period and make period to period comparisons difficult.

Large OEM customers can change their demand on short notice, further adding to the unpredictability of the quarterly sales and earnings.

The Company's quarterly results have in the past and may in the future vary due to the lack of dependable long-term demand forecasts from its larger OEM customers. In addition to this risk, many of the Company's OEM customers have the right to change their demand schedule, either up or down, within a relatively short time horizon. These changes may result in the Company incurring additional working capital costs and causing increased manufacturing unit cost due to these short-term fluctuations. In particular, the quarterly operating results have in the past fluctuated as a result of some of the larger OEM customers changing their orders within a fiscal quarter. The expense levels and inventory, to a large extent, are based on shipment expectations in the quarter. If sales levels fall below these expectations, through a delay in orders or otherwise, operating results are likely to be adversely affected. In addition, the Company has been subject to timing delays in orders for its defense industry and medical molding products which also affects predictability of its earnings. Although the Company continues to attempt to lessen its dependence on a few large customers, it can provide no assurance that it will be able to materially alter this dependency in the immediate future, if at all.

A significant portion of the Company's revenues are derived from the sale of a single product line.

In fiscal years 2011 and 2010, the Company derived 62% and 46%, respectively, of its revenues from medical electrode sensors for use in disposable electrodes. While the technology in electrode sensors has been used for many years, there is no assurance that a new patented or unpatented technology might not replace the existing disposable electrode sensors. Any substantial technological advance that eliminates the Company's products will have a material adverse effect on the Company's operating results.

The Company is dependent on a limited number of customers.

In the fiscal years 2011 and 2010, 34% and 53%, respectively, of the Company's revenues were derived from individual customers representing 10% or more of the total sales. The loss of any one or more of these customers may have an immediate significant adverse effect on our financial results. Currently, the Company generally does not receive purchase volume commitments extending beyond several months. Large corporations can shift focus away from a need for the Company's products and services with little or no warning.

Failure to comply with Quality System Regulations or industry standards could result in a material adverse effect on the Company's business and results of operations.

Micron's Quality Management System complies with the requirements of ISO 13485:2003 and ISO 9001:2008. If Micron were not able to comply with the Quality Management System or industry-defined standards, it may not be able to fill customer orders to the satisfaction of its customers. Failure to produce products compliant with these standards could lead to a loss of customers which would have an adverse impact on the Company's business and results of operations.

If trade secrets are not kept confidential, the secrets may be used by others to compete against the Company.

Micron relies on trade secrets to protect its proprietary processes and there are no assurances that others will not independently develop or acquire substantially equivalent technologies or otherwise gain access to the proprietary process. Ultimately the meaningful protection of such proprietary technology cannot be guaranteed. The Company relies on confidentiality agreements with its employees. Remedies for any breach by a party of these confidentiality agreements may not be adequate to prevent such actions. Failure to maintain trade secret protection, for any reason, could have a material adverse effect on the Company.

If the Company is unable to keep up with rapid technological changes, the processes, products or services it offers may become obsolete and unmarketable.

The medical device, software, and services industries are characterized by technological change over time. Although the Company attempts to expand technological capabilities in order to remain competitive, discoveries by others may make the Company's processes, products or services obsolete. If the Company cannot compete effectively in the marketplace, the potential for profitability and financial position will suffer.

The operation of the WirelessDx's monitoring facility is subject to rules and regulations governing IDTFs; failure to comply with these rules could prevent it from receiving reimbursement from Medicare and some commercial payers.
WirelessDx has a monitoring facility certified as an IDTF in Kentucky that analyzes the data obtained from arrhythmia monitors and reports the results to physicians. In order for it to receive reimbursement from Medicare and some commercial payers, WirelessDx must maintain this certification. An IDTF certification requires that we follow strict regulations governing how the center operates, such as requirements regarding the certifications of the technicians who review data transmitted from monitors acquired by WirelessDx from third parties. These rules and regulations are subject to change. If they change, WirelessDx may have to change the operating procedures at the monitoring facility potentially increasing costs significantly. If management fails to obtain and maintain IDTF certifications, WirelessDx's services may no longer be reimbursed by Medicare and some commercial payers, which could have a material adverse impact on WirelessDx's growth potential.
Inadequate levels of reimbursement from governmental or other third-party payers for procedures using WirelessDx's services may reduce demand for WirelessDx's services and adversely impact its operations and results.
Physicians and other healthcare providers that purchase WirelessDx's services typically rely on governmental and other third-party payers, such as federal Medicare, state Medicaid, and private health insurance plans to pay for all or a portion of the cost of the procedures that utilize those services. The availability of this reimbursement may limit the number of patients. Denial of coverage or reductions in levels of reimbursement to customers for procedures performed by WirelessDx's customers by governmental or other third-party payers may cause WirelessDx's service revenues to decrease.
General economic conditions, largely out of the Company’s control, may adversely affect the Company’s financial condition and results of operations.
The Company’s business may be affected by changes in general economic conditions, both nationally and internationally. Recessionary economic cycles, higher interest rates, higher fuel and other energy costs, inflation, higher levels of unemployment, changes in the laws or industry regulations or other economic factors may adversely affect the demand for the Company’s products. Additionally, these economic factors, as well as higher tax rates, increased costs of labor, insurance and healthcare, and changes in other laws and regulations may increase the Company’s cost of sales and operating expenses, which may adversely affect the Company’s financial condition and results of operations.
The Company is subject to stringent environmental regulations.
Micron's manufacturing operations are subject to a variety of federal, state and local requirements governing the protection of the environment. These environmental regulations include those related to the use, storage, handling, discharge and disposal of toxic or otherwise hazardous materials used in or resulting from Micron’s manufacturing processes. Failure to comply with environmental law could subject the Company to substantial liability or force the Company to significantly change its manufacturing operations. In addition, under some of these laws and regulations, the Company could be held financially responsible for remedial measures if its properties are contaminated, even if it did not cause the contamination.
A product liability suit could adversely affect our operating results.
The testing, manufacture, marketing and sale of the customer's and Company's medical devices and/or components entail the inherent risk of liability claims or product recalls. If the Company's customers are involved in a lawsuit, it is possible that the Company would also be named. Although the Company maintains product liability insurance, coverage may not be adequate. Product liability insurance is expensive, and in the future may not be available on acceptable terms, if at all. A successful product liability claim or product recall could have a material adverse effect on the business, financial condition, and ability to market the Company's products and services in the future.
The Company could become involved in litigation over intellectual property rights.
The medical device, software and services industries have been characterized by extensive litigation regarding patents and other intellectual property rights. Litigation, including interference proceedings in the U.S. Patent and Trademark Office, which would likely result in substantial cost to the Company, may be necessary to enforce any patents issued or licensed to the Company and/or to determine the scope and validity of others' proprietary rights. In particular, competitors and other third parties hold issued patents, which may result in claims of infringement against the

Company or other patent litigation.

The Company may make acquisitions of companies, products or technologies that may disrupt the business and divert management's attention, cause the Company to incur debt or issue equity securities and adversely impact its results of operations and financial condition.

The Company may make acquisitions of complementary companies, products or technologies from time to time. Any acquisitions will require the assimilation of the operations, products and personnel of the acquired businesses and the training and motivation of these individuals. Management may be unable to maintain and improve upon the uniform standards, controls, procedures and policies if the Company fails in this integration. Acquisitions may cause disruptions in operations and divert management's attention from day-to-day operations, which could impair the Company's relationships with current employees, customers and strategic partners. The Company also may have to, or choose to, incur debt or issue equity securities to pay for any future acquisitions and their working capital needs. Such financing may not be available to the Company or may be on terms that involve significant cash obligations as well as covenants and financial ratios that may restrict the Company's ability to operate its business. The issuance of equity securities in connection with an acquired business could be substantially dilutive to the stockholders' holdings. In addition, profitability may suffer because of such acquisition-related costs or amortization costs for other intangible assets. Further, customer satisfaction or performance problems with an acquired business, technology, service or device could also have a material adverse effect on the Company's reputation. If the Company is unable to integrate acquired businesses, products, technologies or personnel with existing operations, or obtain financing on a timely basis and on satisfactory terms, the Company may not receive the intended benefits of such acquisitions. The Company is not currently party to any agreements, written or oral, for the acquisition of any company, product or technology.

Changes in the health care industry or tort reform could reduce the number of arrhythmia monitoring solutions ordered by physicians, which could result in a decline in the demand for our solutions, pricing pressure and decreased revenue. Changes in the health care industry directed at controlling health care costs or perceived over-utilization of arrhythmia monitoring solutions could reduce the volume of solutions ordered by physicians. If more health care cost controls are broadly instituted throughout the health care industry, the volume of cardiac monitoring solutions could decrease, resulting in pricing pressure and declining demand for our services, which could harm our operating results.

Healthcare legislation requiring medical device manufacturers to pay excise taxes on medical devices may have a material adverse effect on the Company's business.

Beginning in 2013, under healthcare reform legislation enacted in March 2010 each medical device manufacturer will be required to pay an excise tax (or sales tax) in an amount equal to 2.3 percent of the price for which such manufacturer sells its medical devices. This tax applies to all medical devices, including a portion of the Company's products which may adversely affect our business, financial condition and results of operations.

The Company may be exposed to potential risks relating to internal control over financial reporting and the ability to have those controls attested to by the independent registered public accounting firm.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002 ("SOX 404"), the Securities and Exchange Commission (the "SEC") adopted rules requiring public companies to include a report of management on the Company's internal control over financial reporting in their annual reports, including Form 10-K. In addition, if a reporting company is an accelerated filer or a large accelerated filer (as defined by the Exchange Act), the independent registered public accounting firm auditing a company's financial statements must also attest to and report on the Company's internal control over financial reporting as well as the operating effectiveness of the company's internal controls. The Company was only subject to the management evaluation and review portion of these requirements for the fiscal year ended December 31, 2011.

In the event the Company qualifies as an accelerated or large accelerated reporting company at the end of its second quarter of 2012, it may be subject to more stringent requirements under SOX 404 for the fiscal year 2012. There can be no assurance that the Company would receive any required attestation from the independent registered public accounting firm. In the event the independent register public accounting firm identified significant deficiencies or material weaknesses in the Company's internal controls that management could not remediate in a timely manner or it was unable to receive an attestation from the independent registered public accounting firm with respect to its internal controls, investors and others may lose confidence in the reliability of the financial statements and the Company's

ability to obtain equity or debt financing in the future could suffer.

Management identified a material weakness in our financial reporting, and failure to remediate it or any future ineffectiveness of internal controls could adversely affect the Company and the price of our common stock.

Management continues to review our internal control systems, processes and procedures for compliance with the requirements of a smaller reporting company under SOX 404. Such a review resulted in identification of a material weakness in our internal controls and a conclusion that our disclosure controls and procedures and internal control over financial reporting were ineffective as of December 31, 2011, as discussed in Section 9A of this annual report on Form 10-K. While we are taking steps to remediate the weakness, there is no guarantee that we will not identify additional material weaknesses in our internal controls in the future. Disclosures of material weaknesses in our SEC reports could cause investors to lose confidence in our financial reporting and may negatively affect the price of our stock.

Item 1B. UNRESOLVED STAFF COMMENTS
None.

Item 2. PROPERTIES
The manufacturing facility and offices of ART and Micron are located in multiple buildings in an industrial area in Fitchburg, Massachusetts. The first building consists of a 22,000 square foot, six story building. The second building is over 94,000 square feet, including a brick three story mill building. A third building of approximately 40,000 square feet, a fourth building of 12,000 square feet and vacant parcel between the buildings in the complex are unoccupied opportunities for expansion. The Company believes its current facilities are sufficient to meet current and future production needs through the fiscal year ending December 31, 2012.
WirelessDx has three leased facilities. The first in Summerside, Prince Edward Island, Canada is occupied by RMMDx Corporation. This 2,500 square foot class A space is occupied pursuant to a lease expiring June 30, 2012. The second in Radnor, Pennsylvania is occupied by RMDDxUSA Corp. This 6,000 square foot class A space was occupied as of January 1, 2011 pursuant to a lease expiring June 30, 2016. The third space is a monitoring center for RMDDxUSA in Hyden, Kentucky which is leased on a month to month basis. Although the current facilities are expected to be sufficient for WirelessDx's current requirements, continued expansion of the business could require an increase of facilities before the end of 2012.

Item 3. LEGAL PROCEEDINGS
The Company is from time to time subject to legal proceedings, threats of legal action and claims which arise in the ordinary course of our business. Management believes the resolution of these matters will not have a material adverse effect on the results of operations or financial condition.

Item 4. MINE SAFETY DISCLOSURES
Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES
ART's Common Stock has been listed on the NYSE AMEX, formerly the American Stock Exchange, since March 3, 1992 and trades under the ticker symbol HRT.
The following table sets forth, for the periods indicated, the high and low sale prices per share for ART's Common Stock as quoted by the NYSE AMEX.

	High	Low
Year Ended December 31, 2011		
1st Quarter	$6.25	$5.20
2nd Quarter	6.02	3.99
3rd Quarter	4.75	3.11
4th Quarter	3.70	3.02
Year Ended December 31, 2010		
1st Quarter	$8.60	$3.20
2nd Quarter	8.33	1.38
3rd Quarter	6.30	4.34
4th Quarter	6.30	5.02

As of March 15, 2012 the number of record holders of ART's common stock is estimated to be 300 not including beneficial holders of our common stock.

Dividend Policy

On each of January 25, 2011 and July 15, 2011 the Board of Directors declared dividends of $0.06 per share payable on March 1 and August 12, 2011, respectively, for a total of $0.12 per share or $344,659 for the year. On each of January 19, 2010 and July 20, 2010 the Board of Directors declared dividends of $0.06 per share payable on March 1 and August 31, 2010, respectively, for a total of $0.12 per share or $336,461 for the year.

On January 25, 2012, the Board of Directors declared a quarterly cash dividend of $0.03 per share. The dividend of $84,119 was paid March 15, 2012.

Future determination as to the payment of cash dividends, if any, will be at the discretion of the Board of Directors and will be dependent upon the Company's financial condition, results of operations, capital requirements, potential acquisitions, and other such factors as the Board of Directors may deem relevant, including any restrictions under any credit facilities in place now or in the future. The Company's demand line of credit agreement contains conditions including prior notification of the payment of dividends.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities

None.

Item 6. SELECTED FINANCIAL DATA

Not Applicable.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

The following discussions of the Company's results of operations and financial condition should be read in conjunction with the consolidated financial statements and notes pertaining to them that appear elsewhere in this Form 10-K.

Any forward-looking statements made herein are based on current expectations of the Company that involve a number of risks and uncertainties and should not be considered as guarantees of future performance. These statements are made under the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Forward looking statements may be identified by the use of words such as "expect," "anticipate," "believe," "intend," "plans," "predict," or "wil

Although the Company believes that expectations are based on reasonable assumptions, management can give no assurance that the expectations will materialize. Many factors could cause actual results to differ materially from our forward looking statements. Several of these factors include, in addition to those contained in "Risk Factors":

- the ability to maintain our current pricing model and/or decrease the cost of sales;
- the ability of the Company to increase sales of higher margin products and services
- variations in the mix of products and services sold;
- the level of demand for our products and services and those that the Company may develop or acquire;
- volatility in commodity and energy prices and the Company's ability to offset higher costs with price increases;
- variability of customer delivery requirements;
- the ability to successfully market WirelessDx services, manage the timing of investment in operational infrastructure, ability to accelerate the pace of revenues from customer implementation and fund the expansion of this operation;
- a stable interest rate market and/or a stable currency rate environment in the world, and specifically the countries the Company is doing business in or plans to do business in;
- continued availability of supplies or materials used in manufacturing at competitive prices;
- the amount and timing of investments in capital equipment, sales and marketing, engineering and information technology resources;
- ability to license our software, provide timely customization and updates;
- the ability to offset higher costs with price increases;
- adverse regulatory developments in the United States or any other country the Company plans to do business in;
- entrance of competitive products and services in the Company's markets;
- the ability of management to execute plans and motivate personnel in the execution of those plans;
- no adverse publicity related to the Company and or its products;
- no adverse claims relating to the Company's intellectual property;
- the adoption of new, or changes in, accounting principles;
- the passage of new, or changes in, regulations; legal proceedings; and

- other risks referenced from time to time elsewhere in this report and in the Company's filings with the SEC.

The Company is under no obligation and does not intend to update, revise or otherwise publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of any unanticipated events.

Results of Operations

The Company’s primary source of revenue is from its medical electrode components and plastic molding segment, Micron, which manufactures components, devices and equipment primarily for the medical and defense industries. The single largest category of revenue in this segment is the production and sale of silver/silver chloride coated and conductive resin sensors used as component parts in the manufacture of integrated disposable electrophysiological sensors. These disposable medical devices are used worldwide in the monitoring of electrical signals in various medical applications. In an effort to leverage these skills, the Company has expanded into custom thermoplastic injection molded products with a full array of design, engineering and production services and management. With the addition of a medical machining cell, the Company began production of patient specific metal and plastic orthopedic devices. ART and WirelessDx provide medical software and services, respectively, to the medical industry. While not currently adding meaningful revenue to the results, management believes these businesses have significant potential for future growth of the Company. Management continues to identify complementary and/or synergistic products, technologies and lines of business in an effort to broaden the Company’s offerings.

The following table sets forth for the periods indicated, the percentages of the net sales represented by certain items reflected in the Company's statements of operations.

	Years ended December 31,			
	2011		2010	
Net sales	100.0	%	100.0	%
Cost of sales	81.0		80.1	
Gross profit	19.0	%	19.9	%
Goodwill impairment	0.4		—	
Selling and marketing	7.2		4.3	
General and administrative	14.6		12.1	
Research and development	1.9		1.1	
Other (expense) income	(0.5	)	0.6	
(Loss) income before income tax provision	(5.6	)	3.0	
Income tax (benefit) provision	(0.1	)	0.8	
Net (loss) income	(5.5	)%	2.2	%

Net Sales

The Company's consolidated net sales for 2011 were $24,256,373, an increase of $897,090 or 3.8%, when compared to the total net sales of $23,359,283 in 2010 as discussed by segment below.

Micron sales for 2011 were $24,123,170, an increase of $1,071,317 or 4.6%, when compared to sales of $23,051,853 in 2010. Micron continues to experience price pressure in a competitive global market. The revenue associated with the sensor business, including silver surcharge, increased as a result of increased volume and silver surcharge. This increase in sensor revenue was offset by the expected decrease in MIT division’s custom manufacturing in defense industry revenue.

WirelessDx net sales were $133,203 for 2011 compared to the segment's first revenues of $4,920 in the fourth quarter of 2010. The medical monitoring segment continued its expansion after receiving a contract with the Veterans Administration and being approved as a service provider and issued a provider number as an IDTF during 2011.

ART net sales were $0 for 2011 compared to $302,510 in 2010. The decrease was due to a lack of license sales with ART's OEM customer in the Japanese market. Programs with the customer beginning in 2012 are expected to yield revenues later in the year.

Cost of Sales

The Company's consolidated cost of sales was $19,648,470 (81.0% of net sales) in 2011 compared to $18,718,008 (80.1% of net sales) in 2010 an increase of $930,462 or 5% as discussed by segment below.

Micron cost of sales was $18,848,945 (78.1% of segment sales) in 2011 compared to $18,608,384 (80.7% of segment sales) in 2010 an increase of $240,561 or 1%. The segment's lean manufacturing programs have increased the gross margin percentage by improving the efficiency of the use of production materials. The cost of silver has generally

been passed on to our customers in the form of a surcharge. The surcharge protects Micron from decreasing gross profits from an increase in the cost of silver. Management routinely reviews its products and programs, including those in development, for contribution and value to our overall business strategy and results. Those that do not have contribution margins equal to or greater than the current average are the focus for process improvement teams. Programs with unacceptable margins will be phased out or discontinued, so that Micron's resources will be used to develop those of more strategic value.

WirelessDx cost of sales was $797,705 in 2011 compared to $6,802 in 2010 an increase of $790,903. The large increase includes the initial startup cost of monitoring and patient call centers. This cost is expected to grow at a slower pace as facilities are fully staffed and functional.

ART cost of sales was $1,820 in 2011 compared to $102,822 in 2010 a decrease of $101,002. In 2010, the software customization project was completed and the associated licenses sold.

Selling and Marketing

The Company's consolidated selling and marketing expense increased to $1,745,856 (7.2% of net sales) in 2011 from $996,183 (4.3% of net sales) in 2010, an increase of $749,673, or 75% as discussed by segment below.

Micron's selling and marketing expense decreased to $748,410 (3.1% of segment sales) in 2011 from $749,507 (3.2% of segment sales) in 2010, a decrease of $1,097, or less than 1%. Micron's selling expense remained stable and is expected to increase in 2012, but not as a percentage of sales. As new programs begin, commissions are higher and will add to expense; however, it is not expected to increase the expense as a percentage of sales.

WirelessDx's selling and marketing expense increased to $794,923 in 2011 from $105,124 in 2010, an increase of $689,798, or 656%. In 2011, the sales force was expanded by the addition of 4 employees. Also contributing to the increase in expense, was the cost of travel as the segment's growth included four additional geographic markets. Business development expense are expected to increase at a faster rate than revenue until scale is reached in late 2012.

ART's selling and marketing expense increased to $202,523 in 2011 from $141,552 in 2010, an increase of $60,971, or 43%. In 2011, ART had business development efforts, travel and trade show expense for the full year when compared to a partial period in 2010.

General and Administrative Expenses

The Company's consolidated general and administrative expense was $3,534,366 (14.6% of net sales) in 2011 as compared to $2,814,974 (12.1% of net sales) in 2010, an increase of $719,394 or 26% as discussed by segment below.

Micron's general and administrative expense decreased to $811,627 (3.3% of net sales) in 2011 from $1,001,856 (4.3% of net sales) in 2010, a decrease of $190,229. This decrease was only a reduction to the cost assigned to this segment. Beginning in 2011, Micron's finance and human resources departments were transfered into the corporate segment as those functions began to service all segments.

WirelessDx's general and administrative expense increased to $955,019 (3.9% of net sales) in 2011 from $444,653 (1.9% of net sales) in 2010, an increase of $510,366. The expense includes the first full year for the segment as well as executive salaries, specific back office support, and travel expenses.

ART's general and administrative expense was $76,888 (0.3% of net sales) in 2011 as compared to $93,328 (0.4% of net sales) in 2010, a decrease of $16,440. This includes costs of the legal work on existing patents, travel expense associated with ART products and other costs to maintain software library.

The Corporate segment increased to $1,690,832 (7.0% of net sales) in 2011 from $1,275,137 (5.5% of net sales) in 2010, an increase of $415,695. A large portion of this increase was the centralization of the finance and human resources departments to the Corporate segment. In 2011, personnel were transfered to this segment and provided support across all segments of the business. Other corporate and travel expenses include corporate attendance at trade events, expansion of the Board of Directors and evaluation of possible acquisition targets.

Research and Development

The Company's consolidated research and development costs increased to $461,225 (1.9% of net sales) in 2011 from $254,501 (1.1% of net sales) in 2010, an increase of $206,724, or 81% as discussed by segment below.

Micron's research and development costs increased to $188,479 (0.8% of net sales) in 2011 from $158,596 (0.7% of net sales) in 2010, an increase of $29,883, or 19%. The expense is related to process improvements on the Micron sensors and snap product lines as well as new processes and capabilities within MIT.

WirelessDx's research and development costs increased to $53,264 (0.2% of net sales) in 2011 from $0 in 2010, and increase of $53,264. This expense is related to various improvements to the proprietary web based physician reporting system. It is expected that this expense will continue with continuous improvements to security, report presentation and customer interface.

ART's research and development expenses increased to $219,482 (0.9% of net sales) in 2011 from $95,905 (0.4% of net sales) in 2010. Research and Development expense in 2011 included the addition of a full-time employee, and additional technical consulting for SAECG Software and PREDICTOR. The 2010 expenses included the technical support of a NIH research project utilizing ART’s proprietary Signal Averaged ECG software and evaluation of other devices for software development.

Other Income (Expense)

Other expense was $134,889 in 2011 compared to income of $124,663 in 2010, a change of $259,552. Interest expense was $249 in 2011 compared to $0 in 2010. The Company does not incur an unused borrowing base fee under our current unsecured credit facility. Other income included bank interest of $11,030 and $11,850, in 2011 and 2010, respectively. In 2011, production machinery was taken offline and the net book value was written down by $153,000. The asset was held for a January 2012 sale. In 2010, the acquisition of RMDDx resulted in a onetime non-cash gain of $146,288 in the quarter ended June 30, 2010 due to bargain purchase accounting. The remainder of other income was net of the gain and other miscellaneous expense items including a loss in the disposal of assets, and currency losses relating to foreign operations in Canada.

Income Taxes

The Company’s combined federal and state effective income tax rate was (1)% and 26% in 2011 and 2010, respectively. The effective rate in 2011 includes the addition of a $351,000 valuation allowance against our foreign deferred tax asset related to the Canadian net operating loss carryforwards. The current year effective tax rate also includes the previous year's return to provision true-ups of $146,000 that are recorded against the current year provision. The effective rates in 2010 were lower than the statutory rates primarily due to the reductions in tax from state and federal research and development and investment tax credits.

Goodwill

The Company accounts for goodwill and indefinite lived intangibles in accordance with ASC 350 “Intangibles – Goodwill and other”. Goodwill is reviewed for impairment annually, or when events arise that could indicate that impairment exists. The provisions of ASC 350 require that the Company perform a two-step impairment test. In the first step, the Company compares the fair value of its reporting units to the carrying value of the reporting units. If the carrying value of the net assets assigned to the reporting units exceeds the fair value of the reporting units, then the second step of the impairment test is performed in order to determine the implied fair value of the reporting units' goodwill. If the carrying value of the reporting units' goodwill exceeds its implied fair value, an impairment loss equal to the difference is recorded.

At December 31, 2011, the market price of the Company's stock was trading lower than its book value for a prolonged period. The Company was required to acknowledge this as a possible triggering event and that an impairment may exist. In addition, the Company had reorganized its reporting unit structure to combine the three reporting units (Micron Products, New England Molders, and Leominster Tool) with goodwill into one reporting unit. The combined reporting unit better reflects the synergies between these components and aligns the segment with how management reviews and operates the business. An analysis of goodwill of the three reporting units prior to combining was performed to determine fair value using income and market approaches. The income approach is based on a discounted cash methodology that includes assumptions of, among other things, forecast income, cash flow, growth rates, and long-term discount rates, all of which require significant judgment. The market approach utilitizes the Company's market data as well as market data from publicly traded companies that are similar to the Company. There are inherent uncertainties related to these factors and the judgment applied in the analysis. Management determined an impairment was required for the Leominster Tool portion of the goodwill equal to $85,239. The Company changed the goodwill annual test date to December 31 aligning the test with the year end audit. This change will provide more time for the Company to complete its assessment prior to its reporting deadline.

(Loss) Earnings Per Share

The basic and diluted loss per share is $0.48 in 2011 as compared to basic and diluted earnings per share of $0.19 in 2010, a decrease of $0.67 per share. The loss per share reflects operational losses during the scale up of WirelessDx, the impairment of equipment held for sale and goodwill, and the addition of tax valuation allowance. The earnings per share for 2010 included a one time non-cash gain of $146,288 in the quarter ended June 30, 2010 due to purchase accounting related to the WirelessDx acquisition. This nontaxable gain, net of after tax acquisition related expenses of $80,000, increased basic earnings per share for 2010 by $0.02.

Off-Balance Sheet Arrangements

The Company entered into a sale lease-back transaction for certain equipment purchased during 2009 totaling $677,810. A five year operating lease obligation for the equipment began December 31, 2009 with the first payment

due February 1, 2010. The transaction includes an additional $320,817 of lease line capacity. The operating lease requires payments totaling $163,893 in 2010, and $207,591 for each year following until 2014.

Liquidity and Capital Resources

Working capital was $6,118,678 as of December 31, 2011 as compared to $8,861,007 as of the same date in 2010. Operating activities produced positive cash flows of $926,488 in 2011, as compared to $2,183,115 in 2010. Cash and cash equivalents were $1,358,223 and $3,962,454 at December 31, 2011, and 2010, respectively. Substantially all of these funds are invested in bank deposit accounts.

Inventories increased to $3,269,482 at the end of 2011, an increase of $200,305 from the end of 2010. The Company's continued lean manufacturing programs resulted in a reduction of inventory in production that was offset by a rise in the cost of silver.

Capital equipment expenditures were $3,703,631 in 2011 as compared to $1,617,238 in 2010. In 2011, Micron installed a 200kW solar panel array and completed an energy optimization program for a capital cost of approximately $1,384,000. This program is expected to significantly reduce Micron's electrical costs. Under a Federal program, Micron submitted a $318,000 grant application for the solar installation in 2012. The majority of Micron's remaining $1,215,000 of capital expenditures were spent on the addition and replacement of production equipment. In 2010, Micron spent approximately $1,302,000 on production equipment. In 2010, the net capital expenditures do not include automated inspection equipment for the sensor line costing $328,817. This equipment was put into service under an operating lease. In 2011 WirelessDx capital expenditures of $951,000 related to medical devices and software as compared to $291,000 for 2010.

An unsecured $3,000,000 demand line of credit was available in 2011, increased from $2,000,000 in 2010. The agreement provides for borrowings up to 80% of eligible accounts receivable plus 50% of finished goods inventories. This facility does not carry an annual borrowing base charge. There were no outstanding borrowings on our line of credit as of December 31, 2011 and 2010. The agreement contains covenants that apply upon drawing on the line. The covenants relate to various matters including notice prior to executing further borrowings and security interests, merger or consolidation, acquisitions, guarantees, sales of assets other than in the normal course of business, leasing, changes in ownership and payment of dividends. No funds have been drawn down on this line during 2011. Subsequent to year end the line of credit was amended to provide that borrowings are secured by accounts receivable, inventory, cash and deposit accounts and $250,000 was drawn on the line. The line of credit has an annual renewal date in April. Under this credit line, the Company has for the benefit of its subsidiary RMDDx secured a $1,000,000 letter of credit to replace a guarantee by the Province of Prince Edward Island. During the second quarter of 2011, this letter of credit lifted the restriction on $510,833 in restricted cash related to a performance guarantee and Canadian Federal contracting economic incentive program involving an unrelated third party.

On December 31, 2009, the Company received a payment of $677,810 for a sale lease-back transaction related to new production equipment installed during the second half of 2009. This transaction created a long term deferred gain on the sale of assets of $22,347, which will be amortized over the 5 year life of the lease. This arrangement included a lease line with a credit limit of $1,000,000. The Company used $320,817 of the remaining lease line for the acquisition of certain production equipment in May of 2010. This lease line was amended in 2012 to accommodate a credit limit increase to $2,000,000, and enable the flexibility of either an operating or capital lease. Production equipment for approximately $523,000 was purchased for Micron using this lease in early 2012.

During the year ended December 31, 2011, the Board of Directors declared and paid two cash dividends of an aggregate of $0.12 per share or a total of $344,659.

The Company has funded working capital and capital expenditures from operations and, subsequent to year end, from borrowings under the line of credit. Management believes that in the event the Company needs to fund working capital, and or future capital expenditures, financing alternatives are available although no commitment for such financing has been arranged as of the date.

Inflation

The Company believes that inflation in the United States or international markets has not had a significant effect on its results of operations except for the impact of the increase in volatility of materials and energy prices, particularly the cost of silver.

Environmental Groundwater

Like many industrial processes, the Micron manufacturing process utilizes hazardous and non-hazardous chemicals, the treatment and disposal of which are subject to federal and state regulation. Since its inception, Micron has expended significant funds to train its personnel, install waste treatment and recovery equipment and retain an independent environmental consulting firm to constantly review, monitor and upgrade its air and waste water treatment activities. As a result, Micron believes that the operations of its manufacturing facility are in compliance with currently applicable safety, health and environmental laws and regulations.

Based on the Company’s analysis, the Company does not expect future costs in connection with environmental matters to have a material adverse effect on its financial condition, result of operations or liquidity.

Recent Accounting Pronouncements

In June 2011, the FASB issued ASU 2011-05, "Comprehensive Income (Topic 220): Presentation of Comprehensive Income". The ASU is effective for interim and annual periods beginning after December 15, 2011, with early adoption permitted. The new guidance eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholder's equity and states that an entity has the option to present the total of comprehensive income, the components of income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. Additionally, entities are required to present on the face of the financial statements

reclassification adjustments for items that are reclassified from other comprehensive income to net income in the statement(s) where the components of net income and the components of other comprehensive are presented. This ASU will change the financial statement presentation of comprehensive income but the Company does not expect the amendments to have a material impact on its results of operations, cash flows, or financial position.

In July 2011, the FASB issued ASU 2011-07, "Health Care Entities (Topic 954): Presentation and Disclosure of Patient Service Revenue, Provision for Bad Debts, and the Allowance for Doubtful Accounts for Certain Health Care Entities." The ASU is effective for interim and annual periods beginning on or after December 15, 2011, with early adoption permitted. The new guidance changes certain presentation and disclosure requirements for Patient Service Revenue. The Company implemented this presentation requirements for year end 2011. As this only effects WirelessDx, the amendments do not have a material impact on its results of operations, cash flows, or a significant change in the presentation of the consolidated financial statements.

In September 2011, the FASB issued ASU 2011-08, "Intangibles—Goodwill and Other (Topic 350): Testing Goodwill for Impairment." The ASU is effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011, with early adoption permitted. The new guidance allows an entity the option to first assess qualitative factors to determine whether existence of events or circumstances lead to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative assessment leads to the determination that the fair value of the reporting unit is not more likely than not less than the carrying value, then performing a two-step impairment test is no longer necessary. The Company does not expect the amendments to have a material impact on its results of operations, cash flows, or financial position.

Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the U.S.A. requires management to make judgments, assumptions and estimates that affect the amounts reported. Note 2 of Notes to Consolidated Financial Statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Some of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of the Company’s financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on the Company’s financial condition and results of operations. Specifically, critical accounting estimates have the following attributes: 1) the Company is required to make assumptions about matters that are highly uncertain at the time of the estimate; and 2) different estimates the Company could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on the Company’s financial condition or results of operations. Estimates and assumptions about future events and their effects cannot be determined with certainty. The Company bases its estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as the Company’s operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within its control and will not be known for prolonged periods of time. These uncertainties are discussed in the section of the Company's Form 10-K entitled “Risk Factors” above. Based on a critical assessment of its accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that the Company‘s consolidated financial statements are fairly stated in accordance with generally accepted accounting principles, and present a meaningful presentation of the Company’s financial condition and results of operations.

Management believes that the following are critical accounting policies:

Revenue Recognition and Accounts Receivable

The Company recognizes revenue upon product shipment or completion of patient monitoring services, provided that there exists persuasive evidence of an arrangement, the fee is fixed or determinable, and collectability of the related receivable is reasonably assured. Revenue from contracted commercial payers is recorded at the negotiated contractual rate.

Based on management's on-going analysis of accounts receivable balances, as to any event that adversely affects the ultimate ability to collect the related receivable, management will record an allowance for bad debts. Bad debts have not had a significant impact on the Company's financial position, results of operations and cash flows.

Inventory and Inventory Reserves

The Company values its inventory at the lower of average cost or net realizable value (FIFO). The Company reviews its inventory for quantities in excess of production requirements, obsolescence and for compliance with internal quality specifications. Any adjustments to inventory would be equal to the difference between the cost of inventory and the estimated net market value based upon assumptions about future demand, market conditions and expected cost to distribute those products to market.

The Company provides for excess, slow moving, and obsolete inventory. A review of inventory on hand is made at least annually and obsolete inventory may be scrapped and/or recycled. The review is based on several factors including a current assessment of future product demand, historical experience, and product expiration.

Deferred Tax Assets

The Company assesses its deferred tax assets based upon a more likely than not to be realized criteria. The Company considers future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance. The Company recognizes the benefits of a tax position if that position is more likely than not to be sustained on audit, based on the technical merit of the position. After management's required analysis of whether the realization of the deferred income tax assets is more likely than not, management concluded that a full valuation allowance is warranted. For the year ended 2011, management increased the valuation allowance in the Canadian subsidiary by $351,000.

Asset Impairment – Goodwill and other intangibles

The Company reviews the valuation of goodwill and indefinite intangible assets to assess potential impairments. ASC 350, “Intangible Assets - Goodwill and Other” requires that the Company perform a two-step impairment test. In the first step, the Company compares the fair value of its reporting units to the carrying value of the reporting units. The present value of an estimate of future cash flows related to goodwill or intangible assets are calculated and compared to the value of the intangible asset. This income approach combined with a market approach based on the market price of similar publicly traded companies, are used to calculate the fair value at year end. If the carrying value of the net assets assigned to the reporting units exceeds the fair value of the reporting units, then the second step of the impairment test is performed in order to determine the implied fair value of the reporting units' goodwill. If the carrying value of the reporting units' goodwill exceeds its implied fair value, an impairment loss equal to the difference is recorded. After management analysis, the Company changed the goodwill annual test date to December 31, aligning the test with the year end audit. As required, the Company's independent registered public accounting firm issued a preferability letter on the matter. This change will provide more time for the Company to complete its assessment prior to its reporting deadline.

The value assigned to indefinite intangible assets is determined by a valuation based on estimates and judgment regarding expectations for the success and life cycle of products previously acquired or others likely to be acquired in the future. If the actual sale of product and market acceptance differs significantly from the estimates, management may be required to record an impairment charge to write down the asset to its realizable value. When impairment exists it could have a material adverse effect on the Company’s business, financial condition and results of operations.

Asset Impairment – Long Lived Assets

In accordance with ASC 360, "Long Lived Assets", management assesses the impairment of long-lived assets and intangible assets with finite lives whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable. When the Company’s management determines that the carrying value of such assets may not be recoverable, management generally measures any impairment on a projected discounted cash flow method using a discount rate determined by management to be commensurate with the risk inherent in its current business model.

Foreign operations

During 2011, it was determined that WirelessDx foreign operations functional currency is U.S. Dollars. Only foreign expense transactions are translated to U.S. dollars where the transaction takes place. Assets and liabilities are maintained in U.S. dollars. Gains and losses resulting from transactions which are denominated in other than the functional currency are reported as other income or loss in the statement of income (loss) in the period the gain or loss is occurred.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not Applicable.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item may be found on pages F-1 through F-19 of this Annual Report on Form 10-K.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES

Not Applicable.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this annual report the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer ("the Certifying Officers"), conducted evaluations of the Company's disclosure controls and procedures as defined under Sections 13a - 15(e) and 15d - 15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). As described below under "Management's Report on Internal Control over Financial Reporting" the Certifying Officers determined that there was a material weakness in the internal control over financial reporting as of December 31, 2011 relating to accounting for income taxes. As a result of this determination, the Certifying Officers have concluded that, as of the end of the period covered by this Annual Report on Form 10-K, the Company's disclosure controls and procedures were not effective to ensure that material information is recorded, processed, summarized and reported by management of the Company on a timely basis in order to comply with the Company's disclosure obligations under the Exchange Act and the rules and regulations promulgated thereunder and management is taking steps to correct such deficiencies.

Management's Report on Internal Control Over Financial Reporting

Our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act.

Internal control over financial reporting is defined in Rule 13a-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, our CEO and CFO and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition or disposition of our assets that could have a material effect on the financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. It is a process that involves human diligence and compliance and is subject to lapses in judgment or breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. While process safeguards can reduce risks, because of inherent limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, under the supervision and with the participation of our CEO and CFO, has evaluated the effectiveness of our internal control over financial reporting as of the end of the period covered by this Report based upon the framework in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on such evaluation, our CEO and CFO have concluded that the Company's internal control over financial reporting is not effective as of December 31, 2011 as a result of a material weakness in internal controls as described below. A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.

As of December 31, 2011, our management has concluded that the controls surrounding the completeness and accuracy of our accounting for income taxes were ineffective. Specifically, certain errors in the computations in preparation of the tax provision reconciliation were not detected in the related review and approval process. The

errors were discovered during the preparation and review of our Annual Report on Form 10-K. These computations were the result of activities in the fourth quarter. Management evaluated the Company's processes surrounding accounting for incomes taxes and determined that its internal controls with respect to the complex evaluation of deferred income tax assets and liabilities and the related provision for income taxes were not sufficient to prevent or detect errors. Accordingly, management has concluded that this control deficiency constitutes a material weakness. The principal factor contributing to the material weakness was a lack of income tax expertise.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm under the rules of the SEC that permit the Company to provide only management's report in this annual report.

Remediation Efforts on the Internal Controls Surrounding the Accounting for Income Taxes.
The Company is implementing enhancements to its internal controls over financial reporting to provide reasonable assurance that errors and control deficiencies in its accounting for income taxes will not recur. These steps include continuing and increased use of third party advisors with expertise in income taxes to assist us with our quarterly and annual income tax provision and increased detail in our tracking, documentation and reconciliation process related to our deferred tax assets.
We anticipate the actions described above and resulting improvements in controls will strengthen our internal control over financial reporting and will address the related material weakness that was identified as of December 31, 2011. Our management will monitor the effectiveness of our changed process on a quarterly basis and as part of our 2012 assessment of internal control over financial reporting, our management will test and evaluate these additional controls to assess whether they are operating effectively.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE
The information with respect to directors and executive officers required under this item is incorporated by reference to the applicable information set forth in the Proxy Statement for the 2012 Annual Meeting of Stockholders.

Item 11. EXECUTIVE COMPENSATION
The information required under this item is incorporated by reference to the applicable information in the Proxy Statement for the 2012 Annual Meeting of Stockholders.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS
The information required under this item is incorporated by reference to the applicable information in the Proxy Statement for the 2012 Annual Meeting of Stockholders.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE
The information required under this item is incorporated by reference to the applicable information in the Proxy Statement for the 2012 Annual Meeting of Stockholders.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES
The information required under this item is incorporated by reference to the applicable information in the Proxy Statement for the 2012 Annual Meeting of Stockholders.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.
(a) We have filed the following documents as part of this report:
1. Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm
Consolidated Financial Statements:
Balance sheets
Statements of income (loss)
Statements of changes in shareholders' equity and comprehensive income (loss)
Statements of cash flows
Notes to consolidated financial statements
2. Financial Statement Schedules
All schedules have been omitted because they are not required, not applicable, or the required information is otherwise included.
3. Exhibits
The Company hereby furnishes the exhibits listed on the attached exhibit index. Exhibits, which are incorporated herein by reference, may be inspected and copied at the public reference facilities maintained by the SEC at Room 1580, Washington, D.C. 20549. Copies of such material may be obtained by mail from the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549, at prescribed rates. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC at the address“http://www.sec.gov”. The Company maintains a web site that contains reports, proxy and information statements and other information electronically at the address “http://www.arthrt.com”. Information on our website is not a part of this Annual Report on Form 10-K.

SIGNATURES

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

ARRHYTHMIA RESEARCH TECHNOLOGY, INC.

By: /s/ James E Rouse
James E. Rouse,
President and Chief Executive Officer
April 25, 2012

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

Signature	Capacity	Date
/s/ James E. Rouse James E. Rouse	President, Chief Executive Officer and Director (Principal Executive Officer)	April 25, 2012
/s/ David A. Garrison David A. Garrison	Executive Vice President of Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	April 25, 2012
/s/ E. P. Marinos E.P. Marinos	Chairman of the Board	April 25, 2012
/s/ Jason R. Chambers Jason R. Chambers	Director	April 25, 2012
/s/ Michael S. Gunter Michael S. Gunter	Director	April 25, 2012
/s/ Patrick L. Muldoon Patrick L. Muldoon	Director	April 25, 2012
/s/ Paul F. Walter Paul F. Walter	Director	

EXHIBIT INDEX

Exhibit Number	Description of Exhibit	Page
3.0	Certificate of Incorporation	(a)
3.1	Amended and Restated By-laws	(c)
4.0	Form of Certificate evidencing shares of the Company's Common Stock.	(a)
4.6*	2001 Stock Option Plan	(b)
4.10*	2010 Equity Incentive Plan	(d)
10.43*	Employment agreement between James E. Rouse and the Company dated December 26th, 2006.	(e)
10.44*	Employment agreement between David A. Garrison and the Company dated January 1, 2007.	(e)
10.45	Lease agreement between Radnor Center Associates and RMDDxUSA Corp. dated December 16, 2010.	(f)
10.46*	Amendment No. 1 to Employment Agreement between James E. Rouse and the Company	(g)
10.47*	Amendment No. 1 to Employment Agreement between David A. Garrison and the Company	(g)
16.1	Resignation of CCR LLP	(h)
18.1	Preferability letter from Independent Registered Accounting firm	X-1
21.0	Subsidiaries	(f)
23.1	Consent of Grant Thornton LLP	X-2
31.1	Certification of the CEO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)	X-3
31.2	Certification of the CFO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)	X-4
32.1	Certification pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X-5
32.2	Certification pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X-6
101.INS†	XBRL Instance Document	
101.SCH†	XBRL Taxonomy Extension Schema Document	
101.CAL†	XBRL Taxonomy Extension Calculation Linkbase Document	
101.DEF †	XBRL Taxonomy Extension Definition Linkbase Document	
101.LAB†	XBRL Taxonomy Extension Label Linkbase Document	

* Indicates a management contract or compensatory plan required to be filed as an exhibit.

(a) Incorporated by reference to the Company's Registration Statement on Form S-18 as filed with the Commission in April 1988, Registration Statement No. 33-20945-FW.

(b) Incorporated by reference to the Company's Form 10-KSB for fiscal year ended December 31, 2001 as filed with the Commission in March 2002.

(c) Incorporated by reference to the Company's Current Report on Form 8-K as filed with the Commission in July 2011.

(d) Incorporated by reference to the Company's Registration Statement on Form S-8 as filed with the Commission in May 2010, Registration Statement No. 333-166600.

(e) Incorporated by reference to the Company's Form 10-KSB for fiscal year ended December 31, 2006, as filed with the Commission in March 2007.

(f) Incorporated by reference to the Company's Form 10-K for fiscal year ended December 31, 2010, as filed with the Commission in March 2011.

(g) Incorporated by reference to the Company's Quarterly Report on Form 10-Q as filed with the Commission in November 2011.

(h) Incorporated by reference to the Company's Current Report on Form 8-K as filed with the Commission in December 2011.

† XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

Arrhythmia Research Technology, Inc.

And Subsidiaries

Contents

Report of Independent Registered Public Accounting Firm

To the Board of Directors and the Shareholders of
Arrhythmia Research Technology, Inc.

We have audited the accompanying consolidated balance sheet of Arrhythmia Research Technology, Inc. (a Delaware corporation) and subsidiaries (collectively the “Company”) as of December 31, 2011, and the related consolidated statements of income (loss), changes in shareholders' equity and comprehensive income (loss), and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. The consolidated financial statements of the Company as of December 31, 2010 and for the year then ended were audited by CCR LLP. We have since succeeded to the practice of such firm.

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 financial position of Arrhythmia Research Technology, Inc. and subsidiaries as of December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

/s/ Grant Thornton LLP

Boston, Massachusetts
April 25, 2012

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Balance Sheets

December 31,	2011	2010
Assets		
Current assets:		
Cash and cash equivalents	$1,358,223	$3,962,454
Trade accounts receivable, net of allowance for doubtful accounts of $58,496 and $83,976, at December 31, 2011 and 2010, respectively.	3,501,744	3,819,361
Inventories (Note 4)	3,269,482	3,069,177
Deferred income taxes (Note 7)	23,700	2,500
Prepaid taxes (Note 7)	188,640	166,694
Deposits, prepaid expenses and other current assets	668,482	397,010
Total current assets	9,010,271	11,417,196
Property, plant and equipment, net (Note 5)	8,587,669	6,691,817
Goodwill (Note 2)	1,479,727	1,564,966
Restricted cash	—	517,571
Other intangible assets, net (Note 2)	149,763	96,446
Total assets	$19,227,430	$20,287,996

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Balance Sheets

December 31,	2011	2010
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$2,327,114	$2,280,992
Accrued expenses	331,929	265,649
Customer deposits	232,550	9,548
Total current liabilities	2,891,593	2,556,189
Long term liabilities:		
Long term deferred tax liabilities (Note 7)	470,000	288,500
Long term portion of deferred gain on lease (Note 9)	13,401	17,868
Total long term liabilities	483,401	306,368
Total liabilities	3,374,994	2,862,557
Commitments and contingencies (Note 9):		
Shareholders' equity (Note 11):		
Common stock, $.01 par value; 10,000,000 shares authorized; 3,926,491 issued, 2,790,514 outstanding	39,265	39,265
Additional paid-in-capital	10,762,338	10,653,210
Treasury stock at cost, 1,135,977 shares	(3,099,842)	(3,099,842)
Accumulated comprehensive income from unrealized currency translation	42,502	42,502
Retained earnings	8,108,173	9,790,304
Total shareholders' equity	15,852,436	17,425,439
Total liabilities and shareholders' equity	$19,227,430	$20,287,996

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Income (Loss)

Years ended December 31,	2011	2010
Net sales	$24,256,373	$23,359,283
Cost of sales	19,648,470	18,718,008
Gross profit	4,607,903	4,641,275
Selling and marketing	1,745,856	996,183
General and administrative	3,534,366	2,814,972
Research and development	461,225	254,501
Goodwill impairment	85,239	—
(Loss) income from operations	(1,218,783)	575,619
Other (expense) income:		
Loss on asset impairment	(153,079)	(24,065)
Other (expense) income	18,190	148,728
Total other (expense) income	(134,889)	124,663
(Loss) income before income taxes	(1,353,672)	700,282
Income tax (benefit) provision (Note 7)	(16,200)	185,000
Net (loss) income	$(1,337,472)	$515,282
(Loss) earnings per share (Note 2):		
Basic	$(0.48)	$0.19
Diluted	$(0.48)	$0.19

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Changes in Shareholders' Equity and Comprehensive Income (Loss)

	Common Stock		Additional paid-in capital	Treasury stock	Accumulated other comprehensive income	Retained earnings	Total	Comprehensive income
	Shares	Amount						
December 31, 2009	3,926,491	$39,265	$10,317,403	$(3,413,742)	$ —	$9,611,483	$16,554,409	$ —
Foreign currency translation adjustment					42,502		42,502	42,502
Share-based compensation			99,156				99,156	
Stock options granted in business combination activities			91,973				91,973	
Treasury stock issued in business combination activities			144,678	313,900			458,578	
Cash dividends						(336,461)	(336,461)	
Net income						515,282	515,282	515,282
Comprehensive income								557,784
December 31, 2010	3,926,491	$39,265	$10,653,210	$(3,099,842)	$ 42,502	$9,790,304	$17,425,439	$ —
Share-based compensation			109,128				109,128	
Cash dividends						(344,659)	(344,659)	
Net loss						(1,337,472)	(1,337,472)	(1,337,472)
Comprehensive loss								(1,337,472)
December 31, 2011	3,926,491	$39,265	$10,762,338	$(3,099,842)	$ 42,502	$8,108,173	$15,852,436	$ —

See accompanying notes to consolidated financial statements.

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Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Cash Flows

(Note 9)

Years ended December 31,	2011	2010
Cash flows from operating activities:		
Net (loss) income	$(1,337,472)	$515,282
Adjustments to reconcile net (loss) income to net cash provided		
by operating activities:		
Non-cash gain from bargain purchase	—	(146,288)
Amortization of gain on lease	(4,467)	(4,479)
Goodwill Impairment	85,239	—
Loss on asset impairment	153,079	24,065
Depreciation and amortization	1,601,381	1,374,889
Provision for doubtful accounts	(25,480)	34,000
Deferred income taxes	160,300	125,000
Share-based compensation	109,128	99,156
Changes in operating assets and liabilities:		
Trade accounts receivable	343,097	(34,823)
Inventories	(200,305	