

SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2010

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)

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

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

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

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

Indicate by check mark 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. Yes No

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

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

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

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. \$12,073,933.

On March 21, 2011, 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, 2010. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

Arrhythmia Research Technology, Inc.
TABLE OF CONTENTS

Part I	Item 1	Business	1
	Item 1A	Risk Factors	7
	Item 1B	Unresolved Staff Comments	11
	Item 2	Properties	11
	Item 3	Legal Proceedings	11
Part II	Item 5	Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	11
	Item 6	Selected Financial Data	12
	Item 7	Management’s Discussion and Analysis of Financial Condition and Results of Operation	12
	Item 7A	Quantitative and Qualitative Disclosures about Market Risk	18
	Item 8	Consolidated Financial Statements and Supplementary Data	18
	Item 9	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	18
	Item 9A	Controls and Procedures	18
	Item 9B	Other Information	19
Part III	Item 10	Directors, Executive Officers, and Corporate Governance	19
	Item 11	Executive Compensation	19
	Item 12	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	19
	Item 13	Certain Relationships and Related Transactions, and Director Independence	19
	Item 14	Principal Accountant Fees and Services	19
Part IV	Item 15	Exhibits and Financial Statement Schedules	19
		Signatures	20
	Exhibit Index		20

PART I

Item 1. BUSINESS.

OVERVIEW

Arrhythmia Research Technology, Inc., a Delaware corporation ("ART"), is engaged in licensing medical software, which analyzes electrical impulses of the heart to aid in the detection of potentially lethal arrhythmias. ART's patented product consists of signal-averaging electrocardiographic (SAECG) software named the PREDICTOR[®] series.

Our 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--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, our 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. There were no sales or licensing of the software in 2009.

ART's wholly owned subsidiary, Micron Products, Inc., a Massachusetts corporation ("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.

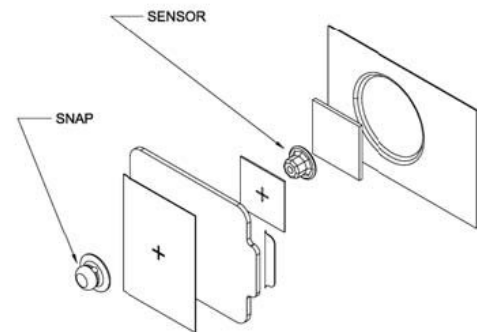


Figure 1: Schematic of Integrated ECG Electrode

Micron is one of a few companies providing silver / silver-chloride sensors to the 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.

Micron Integrated Technologies ("MIT"), a division of Micron 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.

ART's wholly owned subsidiary RMDDxUSA Corp., a Delaware corporation, together with its wholly owned subsidiary RMDDx Corporation, a Prince Edward Island Corporation, (collectively referred to as "WirelessDx") is a development stage 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. Since inception, the efforts have been devoted to the development of remote wireless medical technology for heart monitors. WirelessDx reported its first revenues in the fourth quarter of 2010.

PRODUCTS AND SERVICES

The following table sets forth for the periods specified, the revenue derived from the products and services of ART and its subsidiaries Micron and WirelessDx (collectively the "Company") :

	Year Ended December 31,			
	2010	%	2009	%
Sensors and conductive plastic studs	\$ 10,807,416	46 %	\$ 8,837,180	42 %
Subassembly and metal component manufacturing	6,823,826	29	7,252,081	34
Custom injection molding	2,034,912	9	1,795,490	8
Custom manufactured metal medical devices	1,591,946	7	1,568,808	7
Injection molding tooling	686,700	3	629,595	3
High volume precision molded products	374,744	2	353,326	2
Metal snaps and snap machines	311,227	1	305,930	2
Medical software and services	307,430	1	—	—
Other products	421,082	2	397,364	2
Total	\$ 23,359,283	100 %	\$ 21,139,774	100 %

Sensors

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, and event recorders.

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.

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.

Metal Snaps and Snap Machines

Metal Snap Fasteners

Metal snap fasteners are used as an attachment and conductive connection between the disposable electrode and the lead wires of an ECG machine. 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 Speed Electrode Assembly Machine

Certain manufacturers of disposable medical electrodes use the Company's attaching machines in the assembly of sensors and snaps into disposable electrodes. Manufacturing, leasing, selling, and providing replacement parts to medical sensor and snap application machines provides Micron with a complementary product to sell to existing sensor and snap customers. As a value

added service, a technician can be dispatched to troubleshoot and improve the performance of the customers' fully automated electrode assembly production lines.

Other Products 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.

Defense industry subassembly and metal component manufacturing

The MIT division's product life cycle management program is focused on the integration of plastic and metal components into subassemblies. The value added service of in house production capabilities combined with a network of subcontracted specialty coatings, metallurgical treatments, and unique production capabilities has diversified this product line to include defense industry consumables and equipment subassemblies.

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 recent 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.

Signal-Averaging Electrocardiographic (SAECG) Products - PREDICTOR®

In early 2010, the Company 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 Electrocardiography¹. PREDICTOR is also capable of incorporating additional signal processing capabilities included in the Company'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.

⁽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

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 late 2011 or early 2012.

Medical Diagnostic Services

In June 2010, the Company acquired WirelessDx in order to expand into the medical device and technology-enabled medical diagnostic services sectors. Commercial sales of cardiac event monitoring and mobile cardiac telemetry services were initiated in the last quarter of 2010. WirelessDx intends to leverage current technology to launch new market differentiating mobile health products and services in 2011.

GENERAL

Customers and Sales

During the year ended December 31, 2010, Micron had three major customers, each of which accounted for over 10% of the Company’s sales and a loss of this base may have a material adverse effect on the Company’s results. The three largest customers accounted for 29%, 11%, and 13% of sales in 2010 as compared to 23%, 16%, and 12% of sales for the year ended December 31, 2009.

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 approximate 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,			
	2010	%	2009	%
United States	\$ 12,492,883	54 %	\$ 12,937,615	61 %
Canada	5,468,392	23	3,684,087	17
Europe	2,290,821	10	2,644,727	13
Pacific Rim	2,085,161	9	818,866	4
Other	1,022,026	4	1,054,479	5
Total	<u>\$ 23,359,283</u>	<u>100 %</u>	<u>\$ 21,139,774</u>	<u>100 %</u>

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. The large shift between Europe and the Pacific Rim was due to a major customer moving manufacturing from Europe to Malaysia, and software sales to Japan. Increases in Canada were due to higher volumes of sensors and conductive snaps.

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 registration, the international quality standards for medical devices and manufacturing, qualifies the Company to further expand into medical products. The Company expects to be competitive in more markets with ART's recent registration as a U.S. Food and Drug Administration (FDA) manufacturing facility. 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.

After success in early 2010, management continues to pursue licensing arrangements for its proprietary signal-averaged electrocardiography (SAECG) software, PREDICTOR, to other 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 has recently begun research and development efforts to expand PREDICTOR's diagnostic capability beyond SAECG analysis.

WirelessDx has focused its marketing efforts to medical service providers who would benefit from wireless patient monitoring technologies. The number of competitors, many of whom are well established, continues to grow as the monitoring market changes with the growing acceptance of new methods and technologies to reduce costs while improving outcomes.

Product Suppliers and Manufacturing

Micron manufactures its sensors at its Fitchburg, Massachusetts facility 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.

The Company's 116,000 square foot manufacturing facilities are International Traffic in Arms Regulation (ITAR) and U.S. Food and Drug Administration (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, this facility includes 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 the company's monitoring centers. There are multiple companies offering this service with certain redundancy in data networks. This feature has been tested as control of the data was instantly transferred between facilities.

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, analyzation, 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

ART's research and development efforts have focused primarily on maintaining the software library in the SAECG product lines in a compatible platform. 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, 2010 and 2009, ART had research and development expenses of approximately \$95,905 and \$21,527, respectively. ART expects these expenses to grow as the software is improved and expanded.

In 2010 and 2009, Micron's research and development efforts resulted in \$158,596 and \$219,968 of expense. 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 \$16,600 for the impairment of equipment used for final product testing.

Patents and Proprietary Technology

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.

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 \$4,759 in 2010, and \$2,966 in 2009 in royalties associated with this patent.

Government Regulation

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.

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. 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. ITAR and Foreign Corrupt Practices Act (FCPA) laws and regulations.

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, 2010, the Company had 107 full-time and 9 part-time employees. The employees of the Company 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 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>.

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 current pricing model primarily 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;
- 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;
- healthcare policy changes, and other regulatory changes may have a material adverse effect on the Company's business; 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.

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 2010 and 2009, the Company derived 46% and 42% 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 2010 and 2009, 53% and 51%, 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.

The Quality Management System of Micron, the Company's subsidiary, 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 Company's ability to generate revenues from WirelessDx's operations is dependent upon its ability to enter into service agreements.

WirelessDx's ability to generate revenues is dependent upon its ability to enter into and thereafter maintain and perform under its agreements. In the event that WirelessDx is unable to enter into and maintain such agreements, its results will be adversely impacted. In addition, the failure of its customers to increase the number of monitored patients may adversely affect its business. The market for arrhythmia monitoring solutions is evolving rapidly and is competitive. If competitors are able to develop or market monitoring solutions that are more effective or attractive, WirelessDx's commercial opportunities will be reduced.

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.

The Company is 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 the Company'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 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. 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 for an acquisition 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, 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.

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

Under the recently enacted healthcare reform legislation, beginning in 2013, 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 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 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 Securities Exchange Act of 1934), the independent registered public accounting firm auditing a company's financial statements must also attest to and report on the Company's assessment of the effectiveness of 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, 2010.

In the event the Company qualifies as an accelerated or large accelerated reporting company at the end of its second quarter of 2011, it may be subject to more stringent requirements under SOX 404 for the fiscal year 2011. 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.

Item 1B. UNRESOLVED STAFF COMMENTS.

None

Item 2. PROPERTIES.

The manufacturing facility and offices of the Company are located in two buildings in an industrial area in Fitchburg, Massachusetts. The first building, which was purchased in April 1994, consists of a 22,000 square foot, six story building. The second building, which was purchased in September 1996, is over 94,000 square feet, including an antique brick three story mill building. Commencing in 2003, the 40,000 square foot "Mill" building portion of the second building underwent major renovations to preserve and create functional space from a previously unusable section of the facility. The renovations created space currently occupied by the MIT division. From October 2006 to February 2007, a third building of approximately 40,000 square feet, a fourth building of 12,000 square feet and vacant parcel between the buildings that abut the complex were acquired without any specific requirement for space. The Company believes the acquisition of the adjacent property positions the Company for continued growth in its current location. The Company believes its current facilities are sufficient to meet current and future production needs through fiscal year ending December 31, 2011.

WirelessDx has two leased facilities. The first in Summerside, Prince Edward Island, Canada is occupied by RMMDx Corporation. This 2,000 square foot class A space in a renovated antique brick building is on a month to month lease with the local governmental economic development authority. 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. The combined space is expected to be sufficient to meet the space requirements through the end of 2011.

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.

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 period indicated, the high and low sale prices per share for ART's Common Stock as quoted by the NYSE AMEX.

	<u>High</u>	<u>Low</u>
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
Year Ended December 31, 2009		
1st Quarter	\$ 2.65	\$ 1.38
2nd Quarter	3.46	2.10
3rd Quarter	4.60	2.61
4th Quarter	4.84	3.26

As of March 1, 2011 the number of record holders of ART's common stock is estimated to be 300 not including beneficial holders of our common stock held in street name.

Dividend Policy

On January 19, 2010 and July 20, 2010 the Board of Directors declared dividends of \$0.06 per share. The total 2010 dividends of \$0.12 per share were paid on March 1 and August 31 2010 for a total of \$336,461. No dividends were declared in 2009.

On January 25, 2011, the Board of Directors declared a semi-annual cash dividend of \$0.06 per share. The dividend was paid March 1, 2011.

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.

Equity Compensation Plan Information

The following table provides information, as of December 31, 2010, with respect to our equity compensation plans:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	254,500	7.55	500,000 ⁽¹⁾
Equity compensation plans not approved by security holders	0	0	0
Total	254,500	7.55	500,000 ⁽¹⁾

⁽¹⁾ 2010 Equity Incentive Plan approved by shareholders at the 2010 annual meeting.

Recent Sales of Unregistered Securities

None

Purchases of Equity Securities

On October 3, 2008, our Board of Directors authorized the repurchase in the open market from time to time of up to \$650,000 of our common stock. Repurchases totaling 12,810 and 23,389 shares were made in 2009 and 2008, respectively, for a total cost of \$33,188 and \$53,975. No repurchases were made in 2010.

The Company's purchases are subject to trading restrictions including average volume of shares traded over the previous four weeks, which greatly reduced our ability to repurchase shares.

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 "will".

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 "Factors that may affect future operating results," without limitation:

- 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;*
- variability of customer delivery requirements;*
- ability to license our software, provide timely customization and updates;*
- a stable interest rate market and/or a stable currency rate environment in the world, and specifically the countries where the Company is doing business in or plans to do business in;*
- continued availability of supplies or materials used in manufacturing at competitive prices;*
- volatility in commodity and energy prices and the Company's 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;*
- the ability to maintain compliance with the NYSE AMEX requirements for continued listing of the common stock;*
- 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*
- 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 relates to the manufacturing of components, devices and equipment primarily for the medical and defense industries. The single largest category of revenue relates to Micron's 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 significant 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,	
	2010	2009
Net sales	100.0 %	100.0 %
Cost of sales	80.1	83.1
Gross profit	19.9 %	16.9 %
Selling and marketing	4.3	3.2
General and administrative	12.1	10.0
Research and development	1.1	1.2
Income before income tax provision	3.0	2.5
Income tax provision	0.8	0.7
Net income	2.2 %	1.8 %

Net Sales

Net sales for 2010 were \$23,359,283, an increase of \$2,219,509 or 10%, when compared to the total net sales of \$21,139,774 in 2009. The disposable electrode sensor business continues to experience price pressure in an competitive global market. The revenue associated with the sensor business, including silver surcharge, increased by \$1,970,236 as a result of price stabilization, increased volume and silver surcharge. The complementary metal snap business increased by \$5,299. The high volume precision molded products from Micron increased by \$21,418 when compared to 2009. The MIT division's custom manufacturing experienced a net decrease in revenue of \$108,590, reversing an increase in sales of tooling of \$57,105. There were sales of SAECG software and WirelessDx services in 2010 of \$307,430 compared to no sales in 2009. The remaining increase of \$23,718 was related to the snap assembly machine business and other miscellaneous revenues.

Cost of Sales

Cost of sales was \$18,718,008 (80.1% of net sales) in 2010 compared to \$17,558,140 (83.1% of net sales) in 2009 an increase of \$1,159,868 or 7%. A significant portion of the decrease in the percentage of cost of sales in relation to net sales can be attributed to reduction in per unit material costs. The Company's lean manufacturing programs have increased the gross margin percentage by improving the efficiency of use of production materials. The cost of silver has generally been passed on to our customers in the form of a surcharge. When the price of silver increases, the gross margin on sensors as a percentage of sales will decrease. The surcharge protects the Company from decreasing gross profits while limiting the potential gain from an increase in the cost of silver. Silver surcharge collected from our customers is approximately 19% and 13% of total net sales for years ended December 31, 2010 and 2009, respectively. Management routinely reviews its products, services and programs, including those in development, for contribution and value to our overall business strategy and results. Those that have underperforming contribution margins initially become the focus for improvement teams and, absent future increases in margin or other strategic contribution, will be phased out or discontinued, so that the Company's resources can be put to use in developing those of more strategic value.

Selling and Marketing

Selling and marketing expenses increased to \$996,183 (4.3% of net sales) in 2010 from \$682,568 (3.2% of net sales) in 2009, an increase of \$313,615, or 46%. WirelessDx and new marketing efforts for ART's Predictor software added \$247,000 in selling expenses. The new efforts will continue to add to the cost as a percentage of sales until the business development efforts yield the expected increase in revenues. The remaining expense is mainly attributable to increased travel and trade show costs incurred. A change in sales personnel due to a retirement and replacement will add to Micron's expenses in 2011.

General and Administrative Expenses

General and administrative expenses were \$2,814,972 (12.1% of net sales) in 2010 as compared to \$2,102,461 (10.0% of net sales) in 2009, an increase of \$712,511 or 34%. In 2010, the WirelessDx acquisition and expansion added \$80,000 and \$445,000 in expense, respectively. The remaining increase is attributable to expansion in ART activities, other corporate and travel expenses associated with product development, corporate attendance at trade events, and evaluation of possible acquisition targets. Although the delay by the SEC for outside auditor attestation requirements of SOX Section 404 limited a previously expected increase in audit fees for 2010, the costs associated with the related internal control documentation with outside consultants was \$27,950 and \$46,646 for the twelve months in 2010 and 2009, respectively.

Research and Development

Research and development costs increased to \$254,501 (1.1% of net sales) in 2010 from \$241,494 (1.2% of net sales) in 2009, an increase of \$13,007, or 5%. For the fiscal years ended December 31, 2010, and 2009, ART had research and development expenses of approximately \$95,905 and \$21,527, respectively. Expenses include the technical support of a NIH research project utilizing ART's proprietary Signal Averaged ECG software and evaluation of other devices for software development. In 2010 and 2009, Micron's research and development efforts resulted in \$158,596 and \$219,968 of expense. The expense is for process improvements on the Micron sensor and snap product lines and new processes and capabilities within MIT.

Interest Expense

Interest expense was \$0 in 2010 compared to \$31,699 in 2009, a decrease of \$31,699, or 100%. The 2009 expense was a result of the acquisition note and an equipment loan, which were paid in full in 2008 and 2009, respectively. The Company does not incur an unused borrowing base fee under our unsecured credit facility.

Other Income

Other income was \$124,663 in 2010 compared to \$2,757 in 2009, an increase of \$121,906. Other income included bank interest of \$11,850 and \$12,082, in 2010 and 2009, respectively. The acquisition of RMDDx resulted in a onetime non-cash gain of \$146,288 in the quarter ended June 30, 2010 due to 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 a foreign government's import taxes and the timing of the reimbursement and our WirelessDx operations in Canada.

Income Taxes

The Company's combined federal and state effective income tax rate was 26% and 29% in 2010 and 2009, respectively. The effective rates in 2010 and 2009 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

As of December 31, 2010, the Company's goodwill of \$1,564,966 is related to three reporting units, \$1,244,000 associated with the acquisition of Micron Products, Inc. in 1992, \$235,727 associated with the acquisition of Shrewsbury Molders, Inc. in 2004, and \$85,239 associated with the acquisition of Leominster Tool Co. Inc. in December 2006. There was no impairment to the goodwill associated with or expected in any acquisition based on the first quarter annual impairment test in 2010.

Earnings Per Share

The basic and diluted earnings per share is \$0.19 in 2010 as compared to \$0.14 in 2009, an increase of \$0.05, or 36%. The earnings per share for 2010 included a onetime non-cash gain of \$146,288 in the quarter ended June 30, 2010 due to purchase accounting related to an acquisition. This nontaxable gain, net of the acquisition related expenses of \$80,000 and its tax benefit, increased basic earnings per share for 2010 by \$0.02.

Off-Balance Sheet Arrangements

The Company entered in to 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 \$328,817 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 \$8,902,507 as of December 31, 2010 as compared to \$8,922,328 as the same date in 2009. Operating results produced positive cash flows of \$2,159,050 of which \$1,593,173 was spent on capital asset investment. Cash and cash equivalents were \$3,962,454 and \$3,674,179 at December 31, 2010, and 2009, respectively. Substantially all of these funds are invested in bank deposit accounts.

Inventories increased to \$3,069,177 at the end of 2010, an increase of \$112,495 from the end of 2009. A net increase in inventory was a quantity reduction offset by a rise in the cost of silver. The quantity reduction was the result of continued lean manufacturing programs. These efforts focused production on reducing inventory in production.

Net capital equipment expenditures were \$1,593,173 in 2010 as compared to \$361,195 in 2009. In 2010, the majority of the expenditures were for production equipment and technology. Medical equipment and software related to WirelessDx was approximately \$291,000. Not included in the net capital expenditures was production automation equipment for the sensor line costing \$320,817 and \$677,810 in 2010 and 2009, respectively. This equipment was put into service under an operating lease. In 2009, the majority of the expenditures were for production equipment.

An unsecured \$2,000,000 credit facility was available in 2010 and \$1,000,000 in 2009. The agreement provides for borrowings up to 80% of eligible accounts receivable plus 50% of raw material and finished goods inventories. This facility has no borrowing base charge. There were no outstanding borrowings on our line of credit as of December 31, 2010 and 2009. 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. The Company intends to replace the guarantee of the Province of Prince Edward Island related to \$517,000 in restricted cash with a letter of credit to enable the release of the Province of Prince Edward Island lien on such cash in the second quarter of 2011.

The Company had a one year term note secured by equipment with a limit of \$813,000. The loan was drawn down by \$383,000 for equipment delivered and installed in October 2007. A second payment of \$383,000 was made in January of 2008 for this equipment. In the third quarter of 2009 the equipment note was extended for one year with a decrease in the fixed rate from 6.75% to 6.5% per annum. The equipment note was paid in full on September 15, 2009.

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 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.

During the year ended December 31, 2010, the Board of Directors declared and paid two cash dividends of \$0.06 per share for a total of \$336,461.

Funding for future research and development is expected to be provided by ongoing operations, and at this time there are no plans for projects that would require outside funding.

In October 2008, the Company's Board of Directors authorized the repurchase in the open market from time to time of up to \$650,000 of the Company's outstanding stock. To date an aggregate of 36,199 shares were purchased under the program for an aggregate of \$87,163. No purchases were made in 2010.

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.

Recent Accounting Pronouncements

In February 2010, the Financial Accounting Standards Board ("FASB") issued an update that removes the requirement for a SEC filer to disclose a date through which subsequent events have been evaluated. This change removes potential conflicts with SEC requirements. The adoption did not have an impact on the Company's consolidated financial statements.

In October 2009, the FASB issued Accounting Standards Update ("ASU") No. 2009-13, "Multiple-Deliverable Revenue Arrangements" ("ASU 2009-13"). ASU 2009-13 establishes the accounting and reporting guidance for arrangements including multiple revenue-generating activities, and provides amendments to the criteria for separating deliverables, measuring and allocating arrangement consideration to one or more units of accounting. The amendments in ASU 2009-13 also establish a selling price hierarchy for determining the selling price of a deliverable. Significantly enhanced disclosures are also required to provide information about a vendor's multiple-deliverable revenue arrangements, including information about the nature and terms, significant deliverables, and its performance within arrangements. The amendments also require providing information about the significant judgments made and changes to those judgments and about how the application of the relative selling-price method affects the timing or amount of revenue recognition. The amendments in ASU 2009-13 are effective prospectively for revenue arrangements entered into or materially modified in the fiscal years beginning on or after June 15, 2010. Early application is permitted. The Company is currently evaluating the potential impact, if any, the adoption of ASU 2009-13 will have on its financial position or results of operations.

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 describe 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 entitled "*Factors that may affect future operating results.*" (page 14) 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 payors is recorded at the negotiated contractual rate.

The financing of customer purchased tooling utilizes the direct financing method of revenue recognition. This requires the gain or loss on the sale of the tooling to be recorded at the time the tool is put into service while the customer's stream of payments is reflected as a lease receivable.

Based on management's on-going analysis of accounts receivable balances, and after the initial recognition of the revenue, 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 market (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 maintains some reserve for excess, slow moving, and obsolete inventory. A review of inventory on hand is made at least annually and some obsolete inventory is 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. In accordance with ASC 740 we recognize 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.

Asset Impairment – Goodwill

The Company reviews the valuation of goodwill and intangible assets to assess potential impairments. Management reassesses the useful lives of other intangible assets with identifiable useful lives in accordance with the guidelines set forth in ASC 350, "*Intangible Assets*". The value assigned to 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. To test for impairment, a present value of an estimate of future cash flows related to goodwill or intangible assets with indefinite lives are calculated and compared to the value of the intangible asset during the first quarter annually. 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

The Company 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

The accounting records of the Company's foreign subsidiary are maintained in their local and functional currency. Revenue and expense transactions are translated to U.S. dollars using the average exchange rate of the month in which the transaction took place. Assets and liabilities are translated to U.S. dollars using the exchange rate in effect as of the balance sheet date. Equity transactions are translated to U.S. dollars using the exchange rate in effect as of the date of the equity transaction. Translation gains and losses are reported as a component of accumulated other comprehensive income or loss within stockholders' equity. 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 in the period the gain or loss occurred.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not Applicable

Item 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The information required by this item may be found on pages F-1 through F-18 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"). Based on this evaluation, the Certifying Officers have concluded that the Company's disclosure controls and procedures were 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.

Changes in Internal Control Over Financial Reporting

Further, there were no changes in the Company's internal control over financial reporting during the Company's last fiscal quarter that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

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 Securities Exchange Act of 1934, as amended (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.

During the fiscal year 2010, the Company periodically tested the design and operating effectiveness of its internal control over financial reporting. Among other matters, the Company sought in its evaluation to determine whether there were any “significant deficiencies” or “material weakness” in its internal control over financial reporting, or whether it had identified any acts of fraud involving management or other employees.

Our management, under the supervision and with the participation of our CEO and CFO, has evaluated the effectiveness of our disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) 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 effective as of December 31, 2010. Readers are cautioned that internal control over financial reporting, no matter how well designed, has inherent limitations and may not prevent or detect misstatements. Therefore, even effective internal control over financial reporting can only provide reasonable assurance with respect to the financial statement preparation and presentation.

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 Securities and Exchange Commission that permit the Company to provide only management’s report in this annual report.

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 2011 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 2011 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 2011 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 2011 Annual Meeting of Stockholders.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The information required under this item is incorporated by reference to the applicable information in the Proxy Statement for the 2011 Annual Meeting of Stockholders.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

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 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
March 23, 2011

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
<u>/s/ James E. Rouse</u> James E. Rouse	President, Chief Executive Officer and Director (Principal Executive Officer)	March 23, 2011
<u>/s/ David A. Garrison</u> David A. Garrison	Executive Vice President of Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 23, 2011
<u>/s/ E. P. Marinos</u> E.P. Marinos	Chairman of the Board	March 23, 2011
<u>/s/ Jason R. Chambers</u> Jason R. Chambers	Director	March 23, 2011
<u>Julius Tabin</u>	Director	March 23, 2011
<u>/s/ Paul F. Walter</u> Paul F. Walter	Director	March 23, 2011

EXHIBIT INDEX

Exhibit Number	Description of Exhibit	Page
3.0	Articles 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 26 th , 2006.	(e)
10.44*	Employment agreement between David A. Garrison and the Company dated January 1, 2007.	(e)
10.45	Lease agreement between RMDDxUSA and Brandywine Realty Trust dated December 16, 2010.	X-1
21.0	Subsidiaries	X-2
23.1	Consent of CCR LLP	X-3
31.1	Certification of the CEO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)	X-4
31.2	Certification of the CFO pursuant to Rule 13a-14(a) or Rule 15(d)-14(a)	X-5
32.1	Certification pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X-6
32.2	Certification pursuant to 18 U.S.C. §1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X-7

* 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 May 2009.
- (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.

Arrhythmia Research Technology, Inc.

And Subsidiaries

Contents

Report of Independent Registered Public Accounting Firm [F-2](#)

Consolidated Financial Statements:

Balance Sheets [F-3](#)

Statements of income [F-5](#)

Statements of changes in shareholders' equity and comprehensive income [F-6](#)

Statements of cash flows [F-7](#)

Notes to consolidated financial statements [F-8](#)

Report of Independent Registered Public Accounting Firm

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

We have audited the accompanying consolidated balance sheets of Arrhythmia Research Technology, Inc. and subsidiaries (the "Company") as of December 31, 2010 and 2009, and the related consolidated statements of income, changes in shareholders' equity and comprehensive income and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with 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 consolidated 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 audits 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, 2010 and 2009, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s/ CCR LLP
Westborough, Massachusetts
March 23, 2011

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Balance Sheets

<i>December 31,</i>	2010	2009
Assets		
Current assets:		
Cash and cash equivalents	\$ 3,962,454	\$ 3,674,179
Trade accounts receivable, net of allowance for doubtful accounts of \$83,976 and \$49,976	3,819,361	3,818,538
Inventories (Note 3)	3,069,177	2,956,682
Deferred income taxes (Note 6)	44,000	22,500
Prepaid tax	166,694	123,789
Deposits, prepaid expenses and other current assets	397,010	147,243
Total current assets	11,458,696	10,742,931
Property, plant and equipment, net (Note 4)	6,691,817	6,343,575
Goodwill (Note 2)	1,564,966	1,564,966
Other intangible assets, net	96,446	95,887
Restricted cash	517,571	—
Total assets	\$ 20,329,496	\$ 18,747,359

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Balance Sheets

<i>December 31,</i>	2010	2009
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 2,280,992	\$ 1,543,700
Accrued expenses	275,197	276,903
Total current liabilities	2,556,189	1,820,603
Long term liabilities:		
Long term deferred tax liability (Note 6)	330,000	350,000
Long term portion of deferred gain on Lease (Note 8)	17,868	22,347
Total long term liabilities	347,868	372,347
Total liabilities	2,904,057	2,192,950
Commitments and contingencies (Note 8):		
Shareholders' equity (Notes 7 and 10):		
Common stock, \$.01 par value; 10,000,000 shares authorized; 3,926,491 issued, 2,790,514 and 2,680,341 outstanding respectively	39,265	39,265
Additional paid-in-capital	10,653,210	10,317,403
Treasury stock at cost, 1,135,977 and 1,251,010 shares respectively	(3,099,842)	(3,413,742)
Accumulated other comprehensive income	42,502	—
Retained earnings	9,790,304	9,611,483
Total shareholders' equity	17,425,439	16,554,409
Total liabilities and shareholders' equity	\$ 20,329,496	\$ 18,747,359

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Income

<i>Years ended December 31,</i>	2010	2009
Net sales	\$ 23,359,283	\$ 21,139,774
Cost of sales	18,718,008	17,558,140
Gross profit	4,641,275	3,581,634
Selling and marketing	996,183	682,568
General and administrative	2,814,972	2,102,461
Research and development	254,501	241,494
Income from operations	575,619	555,111
Other income (expense):		
Interest expense	—	(31,699)
Other income	124,663	2,757
Total other expense	124,663	(28,942)
Income before income taxes	700,282	526,169
Income tax provision (Note 6)	185,000	152,000
Net income	\$ 515,282	\$ 374,169

Earnings per share (Note 2):

Basic	\$ 0.19	\$ 0.14
Diluted	\$ 0.19	\$ 0.14

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Changes in Shareholders' Equity and Comprehensive Income

(Notes 2,7 and 10)

	Common Stock Shares	Common Stock Amount	Additional paid-in capital	Treasury stock	Accumulated other comprehensive income	Retained earnings	Total	Comprehensive income
December 31, 2008	3,926,491	\$ 39,265	\$ 10,243,568	\$ (3,380,554)	\$ —	\$ 9,236,196	\$ 16,138,475	
Share based compensation			73,835				73,835	
Treasury stock repurchased 12,810 shares				(33,188)			(33,188)	
Cash dividends (adjustment)						1,118	1,118	
Net income						374,169	374,169	
December 31, 2009	3,926,491	\$ 39,265	\$ 10,317,403	\$ (3,413,742)	\$ —	\$ 9,611,483	\$ 16,554,409	\$ —
Foreign currency translation adjustments					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	

See accompanying notes to consolidated financial statements.

Arrhythmia Research Technology, Inc.

and Subsidiaries

Consolidated Statements of Cash Flows

(Note 9)

<i>Years ended December 31,</i>	2010	2009
Cash flows from operating activities:		
Net income	\$ 515,282	\$ 374,169
Adjustments to reconcile net income to net cash provided by operating activities:		
Non-cash gain from bargain purchase	(146,288)	—
Depreciation and amortization	1,374,889	1,394,604
Provision for doubtful accounts	34,000	4,357
Deferred income tax provision	120,593	33,000
Share based compensation	99,156	73,835
Changes in operating assets and liabilities:		
Trade accounts receivable	(34,823)	(1,117,750)
Inventories	(112,495)	770,810
Deposits, prepaid expenses and other assets	(340,115)	430,177
Accounts payable and accrued expenses	648,851	422,984
Net cash provided by operating activities	2,159,050	2,386,186
Cash flows from investing activities:		
Capital expenditures, net of disposals	(1,593,173)	(361,195)
Acquisitions	16,357	—
Net cash used in investing activities	(1,576,816)	(361,195)
Cash flows from financing activities:		
Payments to notes payable	—	(638,091)
Cash dividend paid	(336,461)	—
Repurchase of stock	—	(33,188)
Net cash used in financing activities	(336,461)	(671,279)
Effect of currency translation on cash and cash equivalents	42,502	—
Net increase in cash and cash equivalents	288,275	1,353,712
Cash and cash equivalents, beginning of year	3,674,179	2,320,467
Cash and cash equivalents, end of year	\$ 3,962,454	\$ 3,674,179

See accompanying notes to consolidated financial statements.

1. Description of Business

Arrhythmia Research Technology, Inc. (“ART”) is engaged in the licensing of medical software, which acquires data and analyzes electrical impulses of the heart to aid in the detection of potentially lethal arrhythmias. RMDDxUSA Corp. , a wholly owned subsidiary of ART, performs US sales and distribution operations for its subsidiary, RMDDx Corporation, (collectively “WirelessDx”) which was acquired in June 2010. WirelessDx is a provider of technology enabled medical diagnostic services. Micron Products, Inc. (“Micron”), a wholly owned subsidiary of ART, is the primary source of consolidated revenues. This primary source of revenue relates to the manufacturing of components, devices and equipment primarily for the medical and defense industries. The single largest product category of revenue relates to Micron's 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.

2. Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of ART, WirelessDx and Micron (collectively the “Company”). All intercompany balances and transactions have been eliminated in consolidation.

Revenue Recognition

The Company recognizes revenue upon product shipment, license acceptance or completion of service, provided that there exists persuasive evidence of an arrangement, the fee is fixed or determinable, and collectability of the related receivable is reasonably assured.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand and on deposit in high quality financial institutions. The Company considers all highly liquid debt instruments with original maturities of three months or less to be cash equivalents.

Inventories

Inventories are stated at the lower of average cost or market. Cost of inventories is determined by the first-in, first-out method.

Concentration of Credit Risk

Financial instruments which potentially expose the Company to concentrations of credit risk, as defined by Accounting Standards Codification (“ASC”) 310 “Receivables”, consist primarily of trade accounts receivable and cash and cash equivalents.

Accounts receivable are customer obligations due under normal trade terms. A large portion of Micron’s products are sold to large diversified medical and defense product manufacturers. The Company does not generally require collateral for its sales; however, the Company believes that its terms of sale provide adequate protection against significant credit risk.

Senior management regularly reviews accounts receivable to determine if any receivables will potentially be uncollectible. The Company includes any accounts receivable balances that are determined to be uncollectible, along with a general reserve, in our overall allowance for doubtful accounts. After all attempts to collect a receivable have failed, the receivable is written off against the allowance. Based on the information available to us, management believes the allowance for doubtful accounts as of December 31, 2010 is adequate.

It is the Company’s policy to place its cash and cash equivalents in high quality financial institutions. The Company does not believe significant credit risk exists above federally insured limits with respect to these institutions.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost and include expenditures which substantially extend their useful lives. Depreciation on property, plant and equipment is calculated using the straight-line method over the estimated useful lives of the assets. Expenditures for maintenance and repairs are charged to earnings as incurred. When equipment is retired or sold, the resulting gain or loss is reflected in earnings.

Goodwill

The Company accounts for goodwill and intangibles in accordance with ASC 350 “Intangibles – Goodwill and other”. ASC 350 requires that companies test goodwill for impairment at least annually. In addition, ASC 350 requires that the Company identify reporting units for the purpose of assessing potential future impairments of goodwill, reassess the useful lives of other existing recognized intangible assets, and cease amortization of intangible assets with an indefinite useful life. An intangible asset with an indefinite useful life should be tested for impairment in accordance with the guidelines in ASC 350. ASC 350 is required to be applied to all goodwill and other intangible assets regardless of when those assets were initially recognized.

There was no impairment to goodwill as of first quarter of 2010 and no indicators have arisen to require the Company to review goodwill in the interim period. The Company performs its annual impairment testing for the goodwill valuation during the first quarter of the fiscal year.

Long-Lived Assets

The Company accounts for long lived assets in accordance with ASC 350. A group of long lived assets used in production and research and development was impaired for \$24,065 as of December 31, 2010.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740 “Income Taxes,” which requires recognition of deferred tax liabilities and assets for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax liabilities and assets are determined based on the difference between the financial statement and tax bases of assets and liabilities using tax rates in effect for the year in which the differences are expected to reverse.

In accordance with ASC 740, the Company recognizes the benefits of a tax position if that position is more likely than not of being sustained on audit, based on the technical merit of the position. Management believes it be more likely than not that the Company can sustain management’s tax positions on audit.

Fair Value of Financial Instruments

The carrying amount reported in the balance sheets for cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the immediate or short-term maturity of such instruments.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates.

Earnings Per Share Data

The Company follows the provisions of ASC 260 “Earnings Per Share,” which requires the Company to present its basic earnings per share and diluted earnings per share, and certain other earnings per share disclosures for each year presented. Basic earnings per share is computed by dividing income available to common shareholders by the weighted average number of common shares outstanding. The computation of diluted earnings per share is similar to the computation of basic earnings per share except that the denominator is increased to include the average number of additional common shares that would have been outstanding if the dilutive potential common shares had been issued. In addition, the numerator is adjusted for any changes in income that would result from the assumed conversions of those potential shares.

Basic and diluted EPS computations are as follows:

<i>Years ended December 31,</i>	2010	2009
Net income available to common shareholders	\$ 515,282	\$ 374,169
Weighted average common shares outstanding	2,737,567	2,680,394
Basic EPS	\$ 0.19	\$ 0.14
Diluted EPS:		
Net income available to common shareholders	\$ 515,282	\$ 374,169
Weighted average common shares outstanding, basic	2,737,567	2,680,394
Assumed conversion of net common shares issuable under stock option plans	41,224	—
Weighted average common and common equivalent shares outstanding, diluted	2,778,791	2,680,394
Diluted EPS	\$ 0.19	\$ 0.14

Stock-Based Compensation

The Company accounts for share based compensation under the provisions of ASC 718 "Stock Compensation," which establishes accounting for equity instruments exchanged for employee services. Under ASC 718, share-based compensation cost is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the employee's requisite service period (generally the vesting period of the equity grant).

Comprehensive Income

The Company follows the provisions of ASC 220 "Comprehensive Income," which establishes standards for reporting and display of comprehensive income, its components, and accumulated balances. Comprehensive income is defined to include all changes in equity except those resulting from investments by owners and distributions to owners. The Company had comprehensive income of \$42,502 from changes in currency valuations with our Canadian operations for the year ended December 31, 2010. Comprehensive income was not recorded in 2009.

Preferred Stock

The Company has 2,000,000 shares of \$1 par value preferred stock authorized. No shares have been issued.

Business Combination Activities

On June 18, 2010, the Company through a newly created Delaware subsidiary named RMDDxUSA Corp. purchased all of the outstanding shares of RMDDx Corporation, a Prince Edward Island corporation referred to collectively as "WirelessDx". The shares were exchanged for 115,033 shares of ART common stock and options to purchase 60,000 shares at \$4.76. These shares and options were immediately placed in escrow and are released and vested based upon the achievement of certain performance targets. The performance targets require client contracts, service volumes and gross sales with minimum gross margins. On October 15, 2010, the first performance target was met and 28,758 shares of stock were released from escrow.

RMDDxUSA Corp. is the U.S. sales and operations entity for and parent of RMDDx Corporation.

RMDDx Corporation is a medical device and diagnostic service company dedicated to the development and commercialization of medical devices, medical information technology, medical diagnostics and patient monitoring through wireless, internet and telecommunication technologies. Since inception, the efforts have been devoted to the development of remote wireless medical technology for heart monitors.

The fair value of the assets acquired and liabilities assumed in the acquisition on June 18, 2010 is as follows:

<u>Assets</u>	
Current Assets	\$ 17,357
Property, Plant and Equipment	83,381
Deferred Tax Assets	165,872
Other Assets	512,483
Total Assets	<u>\$ 779,093</u>
<u>Liabilities</u>	
Current Liabilities	\$ 82,254
Total Liabilities	<u>\$ 82,254</u>

RMDDx Corporation had a deferred tax asset related to losses prior to the close of the transaction. The deferred tax asset is for Canadian and Provincial corporate income taxes.

RMDDx Corporation has \$517,000 in cash which is restricted as it collateralizes a guarantee on a stand-by letter of credit related to a Canadian Federal contracting economic incentive program involving an unrelated third party. Using the judgments of management in the fair market valuation required by ASC 805 "Business Combinations", over the next 5 years the targets of the incentive program are expected to be achieved. These calculations and the associated assumptions are the basis for not including a contingent liability related to the guarantee. The Province of Prince Edward Island (the Province), through an economic incentive program, has committed expense reimbursements up to \$585,000 to the Company in the form of a labor and equipment rebate. Rebates owed at December 31, 2010 were \$133,000.

In March 2011 the Company executed a letter of credit to replace the guarantee of the Province of Prince Edward Island to remove the lien on the restricted cash of \$517,000. The Company expects to have access to the cash during the second quarter of 2011.

The common stock was issued from treasury, and the options were issued outside of the Company's existing stock option plan. The fair value of the options was determined by using the Black Scholes valuation methods described in Note 3. The fair value of the equity issued was determined based on the probability of the management of RMDDx meeting the performance targets required for the release and vesting of shares and options. In compliance with ASC 805-30-30-1, the fair value of the equity was determined to be \$550,551 and was calculated by discounting the targets outside of a 12 month period with an estimate of the probability of attainment. The determination of probabilities was made using the same assumptions used throughout the purchase accounting.

In compliance with 805-30-25-2, this transaction was deemed a "bargain purchase" with the resulting gain of \$146,288 booked as other income in the second quarter of 2010. This increase to other income offsets the general and administrative costs related to the transaction of approximately \$80,000. As defined by FASB ASC 805-30-25, the purchase of RMDDx was not a forced sale in which the seller acted under compulsion. The discount to fair value relates to sellers belief in the future value of the combined entity exceeding the current value of the consideration.

Shipping and Handling Costs

Shipping and handling costs are classified as a cost of sales in the consolidated statements of income. The custom manufacturing divisions as a normal course of business charge their customer base for shipping and handling, and therefore classify the amounts billed as revenue in the consolidated statements of income.

Industry Segments

The Company follows the provisions of ASC 280 "Segment Reporting," which requires reporting of selected information about operating segments in interim and annual financial statements issued to the public. It also establishes standards for disclosures regarding products and services, geographic areas, and major customers. ASC 280 defines operating segments as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance.

Research and Development

Research and development expenses include costs directly attributable to the conduct of research and development programs primarily related to the development of our software products and improving the efficiency and capabilities of our manufacturing processes. Such costs include salaries, payroll taxes, employee benefit costs, materials, supplies, depreciation on research equipment, and services provided by outside contractors. All costs associated with research and development programs are expensed as incurred.

Foreign Operations

The accounting records of the Company's foreign subsidiary are maintained in their local and functional currency. Revenue and expense transactions are translated to U.S. dollars using the average exchange rate of the month in which the transaction took place. Assets and liabilities are translated to U.S. dollars using the exchange rate in effect as of the balance sheet date. Equity transactions are translated to U.S. dollars using the exchange rate in effect as of the date of the equity transaction. Translation gains and losses are reported as a component of accumulated other comprehensive income or loss within stockholders' equity. Gains and losses resulting from transaction which are denominated in other than the functional currency are reported as other income or loss in the statement of income in the period the gain or loss occurred.

Recent Accounting Pronouncements

In February 2010, the Financial Accounting Standards Board ("FASB") issued an update that removes the requirement for a SEC filer to disclose a date through which subsequent events have been evaluated. This change removes potential conflicts with SEC requirements. The adoption did not have an impact on the Company's consolidated financial statements.

In October 2009, the FASB issued Accounting Standards Update ("ASU") No. 2009-13, "Multiple-Deliverable Revenue Arrangements" ("ASU 2009-13"). ASU 2009-13 establishes the accounting and reporting guidance for arrangements including multiple revenue-generating activities, and provides amendments to the criteria for separating deliverables, measuring and allocating arrangement consideration to one or more units of accounting. The amendments in ASU 2009-13 also establish a selling price hierarchy for determining the selling price of a deliverable. Significantly enhanced disclosures are also required to provide information about a vendor's multiple-deliverable revenue arrangements, including information about the nature and terms, significant deliverables, and its performance within arrangements. The amendments also require providing information about the significant judgments made and changes to those judgments and about how the application of the relative selling-price method affects the timing or amount of revenue recognition. The amendments in ASU 2009-13 are effective prospectively for revenue arrangements entered into or materially modified in the fiscal years beginning on or after June 15, 2010. Early application is permitted. The Company is currently evaluating the potential impact, if any, the adoption of ASU 2009-13 will have on its financial position or results of operations.

3. Inventories

Inventories consist of the following:

<i>December 31,</i>	2010	2009
Raw materials	\$ 911,440	\$ 1,043,228
Work-in-process	169,063	234,360
Finished goods	1,988,674	1,679,094
Total	\$ 3,069,177	\$ 2,956,682

The value of silver in our inventory is as a raw material, in work-in-process or as a plated surface on finished goods had an estimated value of \$617,154 and \$583,298 in 2010 and 2009, respectively. As the price of silver rises, management takes great efforts to reduce the inventory of silver. Management endeavors to reduce the inventory of silver to minimize the risk of price fluctuations.

4. Property, Plant and Equipment, Net

Property, plant and equipment consist of the following:

<i>December 31,</i>	Asset Lives	2010	2009
Machinery and equipment	5 to 15 years	\$ 9,803,883	\$ 10,729,220
Equipment held for lease	10 years	69,400	69,400
Building and improvements	20 years	4,115,372	4,073,702
Vehicles	3 to 5 years	160,140	158,908
Furniture, fixtures, computers and software	3 to 5 years	1,150,771	1,345,607
Land		202,492	202,492
Construction in progress		291,491	126,174
Total property, plant and equipment		\$ 15,793,549	\$ 16,705,503
Less: accumulated depreciation		(9,101,732)	(10,361,928)
Property, plant and equipment, net		\$ 6,691,817	\$ 6,343,575

The Company leases attaching machines to customers under operating leases for periods of up to one year with renewable terms. The cost of the leased equipment is fully depreciated. The Company sold two leased machines to its customers in 2009 and none in 2010.

5. Debt

The Company had a note payable resulting from the acquisition of Leominster Tool Co. Inc. of approximately \$200,000 with a balance of \$0 at December 31, 2010 and 2009. This note was paid in full during the first three months of 2009.

The Company had a one year term note secured by equipment for a maximum of \$813,000. In the third quarter of 2009, the equipment note was extended for one year with a decrease in the fixed rate from 6.75% to 6.5% per annum. The equipment note was amortized over 6 years with a balloon payment for the remaining balance at September 15, 2009. This note was paid in full on September 15, 2009.

The Company has an unsecured \$2,000,000 renewable credit facility which provides for borrowings up to 80% of eligible accounts receivable plus 50% of raw material and finished goods inventories up to a \$300,000 maximum at a rate of 2% over LIBOR. This facility has no borrowing base charge. There are no outstanding borrowings on the line of credit at December 31, 2010 and 2009.

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.

On March 16, 2011, ART obtained a \$1,000,000 letter of credit in favor of the Bank of Nova Scotia, replacing the Province of Prince Edward Island's performance guarantee. This performance guarantee is detailed in Note 2 under business combinations.

6. Income Taxes

The income tax provision consists of the following:

<i>Years Ended December 31,</i>	2010	2009
Current:		
Federal	\$ —	\$ 114,000
State	60,000	5,000
Foreign	—	—
	60,000	119,000
Deferred:		
Federal	190,000	44,000
State	(15,000)	(9,000)
Foreign	(50,000)	—
	125,000	33,000
Total income tax provision	\$ 185,000	\$ 152,000

The components of deferred income taxes are as follows:

<i>Years Ended December 31,</i>	2010	2009
Deferred income taxes:		
Inventories	\$ 2,500	\$ 8,000
Other current	41,500	14,500
Total current deferred tax assets	44,000	22,500
Net operating loss carryforward	290,000	—
Property, plant and equipment	(640,000)	(376,000)
Patents and intangibles	20,000	26,000
Total long term deferred tax liability	(330,000)	(350,000)
Deferred income taxes, net	\$ (286,000)	\$ (327,500)

Included in the loss carryforward is approximately \$166,000 acquired during the business combination activities, this deferred tax asset will not be included in the change in deferred taxes on the statement of cash flows.

The Company files a consolidated federal income tax return. The actual income tax provision differs from the federal statutory income tax rate (34%) as follows:

<i>Years Ended December 31,</i>	2010	2009
Tax provision computed at statutory rate	\$ 238,000	\$ 179,000
Increases (reductions) due to:		
State income taxes, net of federal benefit	44,000	33,000
Permanent differences	(40,000)	16,000
Tax credits (Foreign, Federal & State)	(50,000)	(72,000)
Other	(7,000)	(4,000)
Income tax expense	\$ 185,000	\$ 152,000

The Company files income tax returns in the U.S. Federal jurisdiction, Canadian jurisdiction and various state jurisdictions. The periods from 2007 to 2009 remain open to examination by the IRS and state jurisdictions. The Company believes it is not subject to any significant tax risk. The Company does not have any accrued interest or penalties associated with any unrecognized tax benefits, nor were any interest expenses recognized during the year ended December 31, 2009 and 2010.

7. Employee Benefit Plans

The Company sponsors an Employee Savings and Investment Plan under Section 401(k) of the Internal Revenue Code covering all eligible employees of the Company. Employees can contribute up to 90% of their eligible compensation to the maximum allowable by the IRS. The Company's matching contributions are at the discretion of the Company. The Company's matching contributions in 2010 and 2009 were \$35,599 and \$28,861, respectively.

The Company sponsors a Group Registered Retirement Savings Plan (RSPP) for the Canadian employees of WirelessDx. The plan allows for employee contributions to be matched up to 5% of wages into a group administered savings plan. Contributions are tax-deductible and accumulate in a tax shelter for the benefit of our employees. The Company's matching contributions in 2010 were \$1,578.

On December 16, 2009, the Board of Directors, after a recommendation from management and approval by the Compensation Committee, granted 75,500 incentive stock options and non-qualified stock options to vest over five years with an effective grant date of January 4, 2010 priced at the average closing price for the prior ten trading days. Forty percent of the options were granted to non-executive management. These options were granted from the shareholder approved 2001 stock option plan described in Note 10.

On March 10, 2010, the Company's Board of Directors adopted the Arrhythmia Research Technology, Inc. 2010 Equity Incentive Plan (the "**2010 Plan**") upon the recommendation of the Compensation Committee which was approved by stockholders at the 2010 Annual Meeting. The 2010 Plan authorizes the issuance of an aggregate of 500,000 shares, namely, 400,000 shares of our common stock plus an aggregate of 100,000 shares previously reserved for issuance under the Company's 2005 Stock Award Plan (the "**2005 Plan**"). The 2010 Plan replaced in its entirety the 2005 Plan, under which no grants have been made. The Company's 2001 Stock Option, which expires in 2011, will continue to govern outstanding options but it is the Company's intention that no further options will be granted under the 2001 Plan. Following the adoption by stockholders, the Company has one plan providing the Company flexibility to award a mix of stock options, equity incentive grants, performance awards and other types of stock-based compensation and under which an aggregate of 500,000 shares will be reserved for such grants.

8. Commitments and Contingencies

Legal Matters

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 our results of operations or financial condition.

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 and subject to the difficulty in estimating these future costs, 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.

Employment Agreements

The Company has employment agreements with two executives extending through October 5, 2011 and January 1, 2012. The agreements provide for a base compensation and certain other benefits. The agreements also contain other terms and conditions of employment, including termination payments under certain circumstances.

Operating Leases

The Company leases vehicle and equipment under non-cancelable lease arrangements. Lease expense under all operating leases was approximately \$171,422 and \$8,100 in 2010 and 2009, respectively.

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 is being amortized over the 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.

On December 16, 2010, the Company's subsidiary RMDDxUSA Corp. signed a lease for 5,400 square feet of office space in Radnor, Pennsylvania. The lease has a term of 66 months. This lease was signed without guarantee from ART and serves as the US operational headquarters for the WirelessDx operations.

Future minimum operating lease payments as of December 31, 2010 are approximately as follows:

<i>Year</i>	<i>Amount</i>
2011	\$ 305,997
2012	357,089
2013	356,474
2014	355,947
2015	152,065
2016	76,971
Total	\$ 1,604,543

9. Supplemental Cash Flow Information

Cash paid for interest for the years ended December 31 are as follows:

	2010	2009
Interest	—	31,699

In 2009 and 2010, the installation of production equipment costing \$677,810 and \$320,817, respectively was financed with an operating lease and did not require a cash outlay from the Company.

In 2010, an acquisition used 115,033 shares of ART common stock and options to purchase 60,000 shares at \$4.76 in lieu of cash.

10. Stock Options

The Company accounts for non-cash share based compensation under ASC 718 “Stock Compensation,” which establishes accounting for equity instruments exchanged for employee services. Under ASC 718, share-based compensation cost is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the employee’s requisite service period (generally the vesting period of the equity grant).

For the year ended December 31, 2010 and 2009, share-based compensation included in general and administrative expenses amounted to \$99,156 and \$73,835, respectively.

The fair value of each stock option granted is estimated on the date of grant using the Black-Scholes option-pricing model. Key assumptions used to estimate the fair value of the stock options include the exercise price of the award, the expected option term, and the expected volatility of the Company’s stock over the option’s expected term, the risk free interest rate over the option’s expected term, and the Company’s expected annual dividend yield. The Company believes that the valuation technique and the approach utilized to develop the underlying assumptions are appropriate in calculating the fair values of the Company’s stock options for the year ended December 31, 2010 and 2009. Estimates of fair values are not intended to predict actual future events or the value ultimately realized by persons who receive equity awards.

The fair value of the option grant in 2010 was estimated on the grant date using the Black-Scholes option pricing model with the following assumptions:

	Incentive Options	Business Combination
Expected option term ⁽¹⁾	4.5 years	5.0 years
Expected volatility factor ⁽²⁾	31%	46%
Risk-free interest rate ⁽³⁾	1.4%	1.2%
Expected annual dividend yield	0.00%	1.20%

- (1) The option life was determined using the simplified method for estimated expected option life, which qualifies as “plain-vanilla” options.
- (2) The stock volatility for each grant is determined based on the review of the experience of the weighted average of historical daily price changes of the Company’s common stock over the most recent year.
- (3) The risk-free interest rate for periods equal to the expected term of the share option is based on the U.S. Treasury yield curve in effect at the time of grant.

Share-Based Incentive Plan

At December 31, 2010, the Company had one stock option plan that includes both incentive and non-qualified stock options to be granted to certain eligible employees, non-employee directors, or consultants. The maximum number of shares reserved for issuance is 400,000 shares. The options granted have six-year contractual terms and either vest immediately or vest annually over a five-year term.

At December 31, 2010, there were 168,000 shares available for future grants under the above stock option plan.

The following table sets forth the stock option transactions for the year ended December 31, 2010:

	Number of shares	Weighted average Exercise Price	Weighted average remaining contractual term	Aggregate Intrinsic Value
Outstanding at December 31, 2008	208,000	\$ 10.45	3.7 years	
Granted	—			
Exercised	—			
Cancelled/expired	(29,000)	5.45		
Outstanding at December 31, 2009	179,000	\$ 9.29	3.1 years	
Granted	135,500	\$ 4.01		\$ 214,390
Exercised	—			
Cancelled/expired	—			
Outstanding at December 31, 2010	314,500	\$ 7.01	3.3 years	\$ 214,390
Exercisable at end of year	130,400	\$ 9.24	2.1 years	\$ 12,450

The weighted average fair value of stock options granted during 2010 was \$1.32.

During the year ended December 31, 2010 and 2009, no options were exercised. At December 31, 2010 and 2009, the intrinsic value of the exercisable options is \$12,450 and \$0, respectively.

The following table sets forth the status of the Company's non-vested options for the year ended December 31, 2010:

	Number of shares	Weighted average Fair Value
Non-vested at December 31, 2009	86,800	\$ 3.42
Granted	135,500	1.32
Vested	(38,200)	2.92
Cancelled/expired	—	
Non-vested at December 31, 2010	184,100	\$ 1.98

The following table presents the average price and contractual life information about options outstanding and exercisable at December 31, 2010:

Exercise Price	Number of Outstanding Shares	Weighted Average Remaining Contractual Life (years)	Options Currently Exercisable
\$3.41	75,500	5.01	-
\$4.76	60,000	4.46	15,000
\$7.15	96,000	3.01	38,400
\$9.86	63,000	0.97	63,000
\$12.42	10,000	1.59	8,000
\$23.10	10,000	2.18	6,000

As of December 31, 2010, there was \$194,797 of unrecognized compensation cost related to non-vested share based compensation arrangements granted under the stock option plan. This cost is expected to be recognized over a weighted average period of 3.48 years.

As of December 31, 2009, there was \$221,301 of unrecognized compensation cost related to non-vested share based compensation arrangements granted under the stock option plan. This cost is expected to be recognized over a weighted average period of 3.99 years.

11. Industry and Geographic Segments

The Company's operations are classified into three business segments: medical electrode components and plastic molding, computerized medical instruments and medical monitoring services.

The following table shows sales, operating income (loss) and other financial information by industry segment as of and for the years ended December 31, 2010 and 2009:

<i>Year ended December 31, 2010</i>	Medical Electrode Components and Plastic Molding	Computerized Medical Instruments	Medical Monitoring Services	Corporate	Consolidated
Sales	\$ 23,051,853	\$ 302,510	\$ 4,920	\$ —	\$ 23,359,283
Operating income (loss)	\$ 2,533,509	\$ (131,097)	\$ (551,659)	\$ (1,275,134)	\$ 575,619
Capital Expenditures	\$ 1,293,036	\$ 8,501	\$ 291,636	\$ —	\$ 1,593,173
Depreciation and Amortization	\$ 1,267,525	\$ —	\$ 21,762	\$ 85,602	\$ 1,374,889
Total Assets at December 31, 2010	\$ 14,523,765	\$ 862,214	\$ 1,952,464	\$ 3,301,053	\$ 20,639,496

<i>Year ended December 31, 2009</i>	Medical Electrode Components and Plastic Molding	Computerized Medical Instruments	Medical Monitoring Services	Corporate	Consolidated
Sales	\$ 21,139,774	\$ —	\$ —	\$ —	\$ 21,139,774
Operating income (loss)	\$ 1,714,964	\$ (35,721)	\$ —	\$ (1,124,132)	\$ 555,111
Capital Expenditures	\$ 361,195	\$ —	\$ —	\$ —	\$ 361,195
Depreciation and Amortization	\$ 1,310,772	\$ —	\$ —	\$ 83,832	\$ 1,394,604
Total Assets at December 31, 2009	\$ 14,372,218	\$ 50,927	\$ —	\$ 4,324,214	\$ 18,747,359

The following table sets forth the geographic distribution of the Company's net sales:

	2010	2009
United States	\$ 12,492,883	\$ 12,937,615
Canada	5,468,392	3,684,087
Europe	2,290,821	2,644,727
Pacific Rim	2,085,161	818,866
Other	1,022,026	1,054,479
Net Sales	\$ 23,359,283	\$ 21,139,774

The following table sets forth the percentage of net sales to significant customers of the medical electrode and injection molded component segment in relation to total segment sales:

<i>Customers</i>	2010	2009
A	29 %	23 %
B	11 %	16 %
C	13 %	12 %

12. Quarterly Financial Data

<i>(unaudited)</i>	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2010				
Net Sales	\$ 5,585,360	\$ 5,782,279	\$ 5,888,277	\$ 6,103,367
Gross Profit	984,148	1,094,477	1,282,594	1,280,055
Net Income	102,611	218,687	119,528	74,456
Basic Earnings per share	0.04	0.08	0.04	0.03
Diluted Earnings per share	0.04	0.08	0.04	0.03
2009				
Net Sales	\$ 4,683,454	\$ 5,371,439	\$ 5,457,377	\$ 5,627,504
Gross Profit	944,322	875,133	881,309	880,870
Net Income	81,774	76,920	108,214	107,261
Basic Earnings per share	0.03	0.03	0.04	0.04
Diluted Earnings per share	0.03	0.03	0.04	0.04