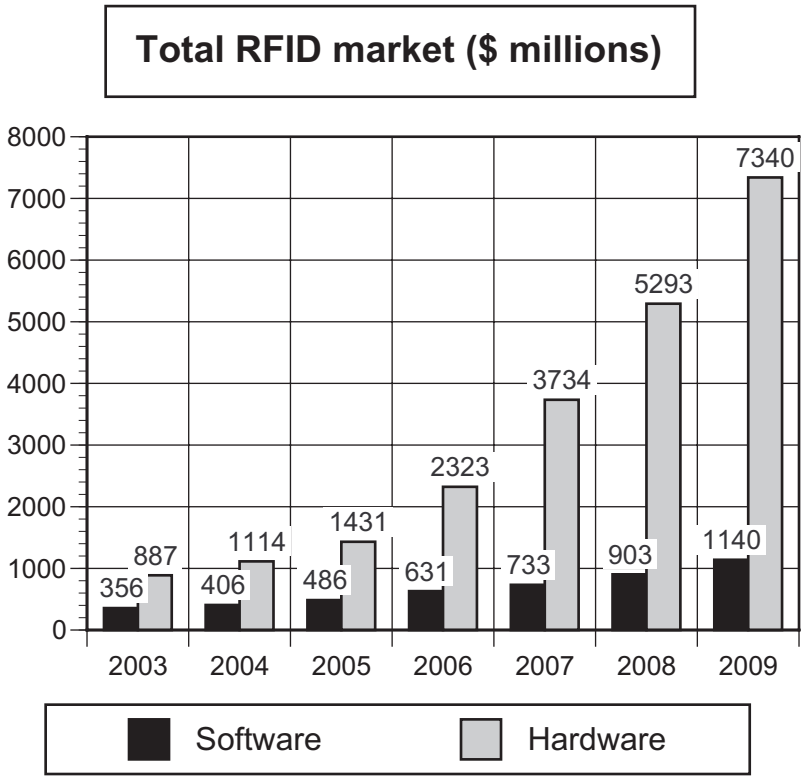
RFID

Radio Frequency Identification

MONTHLY NEWSLETTER

Covering Markets, Technology, and Applications

Vol. 3 No. 12 **December 2006**



Source: ABI Research

In This Issue...

CONTRACTS

Harmon Medical and Rehabilitation Hospital launches RFID-based asset tracking solution

Exavera Technologies Incorporated and Patient Care Technology Systems (PCTS) announced their successful

RFID Newsletter is published by Information Gatekeepers Inc.
320 Washington St., Brighton, Massachusetts 02135, USA. Fax: (617) 782-5735. Editorial telephone: (617) 782-5033.
Circulation telephone: (617) 782-5033. (800) 323-1088 (Outside MA)
Publisher/Editor: Dr. Paul Polishuk **Editor:** Hui Pan **Managing Editor:** Bev Wilson
Circulation Mgr: Jaime Perez **Subscription rates:** $675 per year, U.S. and Canada; $725 per year elsewhere.
Discounts available for multiple subscriptions.

implementation of an integrated real-time location system (RTLS) at the Harmon Medical and Rehabilitation Hospital in Las Vegas, Nevada. Harmon, a 118-bed sub-acute care facility, is part of the Fundamental LTC family of healthcare facilities. The hospital's staff will use the browser-based solution to locate nearly 300 assets in both clinical and non-clinical areas throughout the entire hospital.

At the core of the solution is Exavera's eShepherd Location Services solution, which includes RFID tags and readers as well as intelligent software to calculate the whereabouts of tagged items. PCTS's Amelior Tracker software represents an intuitive end-user interface that allows hospital staff to locate a wide array of clinical and non-clinical assets, including pumps, wheelchairs, telemetry equipment and even maintenance tools from any computer on the hospital network. Amelior Tracker also offers the analytical tools to optimize asset usage and inventory.

"At Fundamental, we're always seeking out new ways to allow our talented staff to focus on their job of providing outstanding care for our patients," said Scott Hillegass, vice president at Fundamental Long Term Care. "With the deployment of the Exavera/PCTS solution, we will be minimizing the time our healthcare professionals spend searching for the tools of the trade, in turn maximizing their time as caregivers."

"The deployment at Harmon is our most exciting to date, as our partnership with Patient Care Technology Systems takes the value of our solution to all new levels," said Scott Zeller, vice president of corporate affairs at Exavera. "The insight we provide coupled with the analytical tools inherent in the Amelior suite translates to an optimized workflow model and significant cost savings for any hospital."

From any nurse's station throughout the hospital, staff members can search for a specific item or the nearest of a particular type of asset. The results are shown both as a text-based report sorted by location and as a "dot-on-a-map" visual representation. When clicking on a particular item, the asset record appears, including information such as manufacturer, serial number, and calibration or maintenance notes. In the second phase of the deployment, security alerts will be delivered to appropriate staff members when certain items are leaving the building. Furthermore, through the analysis of location history, asset utilization and inventory can be significantly improved.

"There is a great deal of excitement around here, as this system solves the universal problem in hospitals of finding a particular piece of equipment when you need it," said Jan Vinson, clinical director at Harmon.

"We are pleased to be partnering with Exavera's RFID infrastructure," said Tony Marsico, CEO of PCTS. "The ease with which our solutions have integrated demonstrates their flexibility to support the diversity of workflow processes in healthcare environments."

MicroTRAKgps completes first purchase order shipments for Jaguar and LandRover

Less than a week after announcing the approval of a Parts Submission Warrant by Jaguar and LandRover, MicroTRAKgps, a division of The Tracking Corporation, announced that it has completed shipment of the first purchase order for the MicroTRACKgps theft recovery system.

MicroTRAKgps, a provider of Global Positioning Systems (GPS) and RFID technology solutions, announced November 21 that Jaguar and LandRover have approved a PSW submitted on the MicroTRAKgps theft recovery system. This was the final step in the consent process to facilitate the launching of a new GPS theft recovery product line that will bear the prestigious name of the automotive manufacturer, Jaguar Watch.

"We are happy to announce that we have completed our first purchase order for the product, and will start December shipments on Monday," said Walter Stock, CFO of The Tracking Corporation. "Additionally, the certification of Jaguar dealers and technicians is actually proceeding ahead of schedule."

"I am proud of our team of specialists and the amount of effort that has been put forth to present an exceptional product that the automotive manufacturer feels comfortable in attaching their name to. MicroTRAKgps is proud to have been endorsed by such a reputable manufacturer," said Jerry Grisaffi, CEO of The Tracking Corporation.

"We are happy with the response we're receiving from dealers, and the customers who have already initiated service," Stock added.

Alanco TSI PRISM awarded Indiana Juvenile Detention Center project

Alanco Technologies Inc., a provider of wireless tracking and asset management solutions, announced that it will provide a Wi-Fi-compatible TSI PRISM RFID inmate tracking system for the Marion County (Indianapolis) Juvenile Detention Center which will be integrated with the facility's IT infrastructure. Installation of the RFID system, valued at approximately $650,000 including design services and staff training, is anticipated to begin in early December.

The TSI PRISM project was facilitated by MindGent Healthcare Services LLC, an Indianapolis-based solution provider for hospitals, physician practices, and clinics that optimize operations, leverage state-of-the-art clinical systems, enhance care provisioning, and maximize revenue generation. MindGent was awarded the overall contract with Marion County to provide an electronic medical records system and 24-hour call center, as well as the RFID inmate tracking system, for its Juvenile Detention Center. The TSI PRISM software will be integrated with the Marion County Juvenile facility's Quest operating system to enable seamless data flow from a central intake point as each youth is placed in custody and registered into the facility. The Marion County Juvenile Detention Center houses up to 200 male and female offenders under the age of 18, determined by the juvenile courts as unsuitable to return home or to parental custody.

Julie Beckner, president and CEO of MindGent Healthcare Services, said, "The Juvenile Facility's current system was bogged down in an endless cycle of bureaucratic paperwork that is inefficient and ultimately costly to the taxpayers. We are eager to provide a solution that will enhance services to the children and potentially save the Marion County Juvenile Detention Center millions of dollars."

Greg M. Oester, Alanco/TSI PRISM president, commented, "The Marion County project represents an important advance in our efforts to promote facility efficiencies by fully integrating TSI PRISM into general facility data base platforms and merging with other prison security system software, such as CCTV cameras. Our Wi-Fi-compatible TSI PRISM system employs an infrastructure network that can be shared with other Wi-Fi-enabled devices, such as laptops or wireless PDAs. Wi-Fi compatibility lowers the cost of installing multiple electronic systems, and provides the ability to add new wireless technology as it becomes available. These enhancements to the TSI PRISM system will improve the overall value proposition to our customers and further strengthen our position as the leading provider of RFID tracking systems for the corrections industry."

NEW PRODUCTS

WJ Communications introduces next-generation RFID reader module with 1-Watt Gen2 Dense Reader (DRM), UHF near field operation, and worldwide coverage

WJ Communications Inc., a designer and supplier of radio frequency (RF) products and solutions for the wireless infrastructure and RFID reader markets, announced the availability of WJR 7000, the next generation of WJ's state-of-the-art modules, designed to support full 1-watt Gen2 Dense Reader spectrum, fast data rate of 240KHz, and worldwide operation capability. The WJR 7000 is an engineering breakthrough providing comparable performance to fixed/portal readers but in a module the size of a business card. These next-generation modules are targeted for North America, Europe, and Asia-Pacific (AP) markets

and will enable customers to adapt superior RFID functionality and worldwide UHF capability in handhelds, printers, forklift readers, portal readers, and other mobile devices.

"Building upon our continued success with the MPR product line, we are introducing the next-generation WJR modules to meet our customers' needs to provide RFID enabled mobile devices capable of worldwide UHF coverage and best in class performance," said Haresh Patel, SVP of sales and marketing at WJ Communications. "Features such as UHF Near Field Compatibility for item level tracking, Gen2 Dense Reader Mode capability at full 1 watt, 240 KHz data rates and worldwide coverage for UHF RFID operation, allows WJ to provide the Industry's leading RFID modules for integration into our customers' mobile devices. These leading-edge products deliver superior range and read/write throughput, which are crucial to Consumer Product Groups (CPGs) and retailers for maximizing ROI."

The 1.0-Watt WJR7000 reader module operates over the North America, Europe, and many AP regions' UHF frequency band (902-928MHz) and includes the RF, digital circuitry, and embedded firmware required for Class 1 Gen1 ISO18000-6C (UHF Gen2) and ISO 18000-6B international standards. The WJR7000 leverages the ubiquitous PCMCIA Type II package with 3.3V CMOS levels (up to 5V) serial communications and can be operated via the included WJ Graphical User Interface (GUI). The intuitive command set allows for extremely fast development of custom applications via an open source DLL and API support. The WJR 7000 is plug-and-play compatible with WJ's MPR 7000 module.

RFID,LTD. to improve airline luggage routing with BagChip technology

RFID LTD. announced that their "BagChip" program has been launched, focusing RFID technology as a solution to the global airlines' monumental "lost baggage" issue.

Delta Airlines began testing the viability of an RFID baggage tracking solution in 2004. Delta then estimated that approximately 0.7 percent of baggage handled is misplaced, which translated into roughly 800,000 bags per year. Transporting those bags to their rightful owners cost the company an estimated $100 million annually.

Most members of the AMEX Airline Index have also used RFID in conjunction with baggage handling through their operations at Las Vegas's McCarran Airport.

Individual travelers will have the opportunity to purchase "BagChip" tags directly from RFID LTD. "BagChips" will host the travelers name, address, and phone number, as well a unique numeric ID.

Airport personnel can quickly scan baggage inventory using hand-held medium-range transponders by Alien Technology or Symbol Technologies Inc. to locate the lost bags at predetermined places within the airport's baggage system.

Estimated price for a "BagChip" is $10 for the first version of tags that have not been integrated into an airline's legacy baggage system.

Multispectral Solutions announces release of its UWB Sapphire VISION RFID reader

Multispectral Solutions Inc. (MSSI), a provider of ultra wideband (UWB) systems, has introduced the latest in its Sapphire product line, Sapphire VISION, specifically targeted at RFID applications. Sapphire VISION is a perfect complement to MSSI's award-winning Sapphire DART real-time location system (RTLS), being fully compatible with all DART tag configurations.

Sapphire DART currently provides customers with unparalleled reliability and accuracy for asset localization. Sapphire VISION, based upon DART's field-proven UWB technology, brings yet another dimension to inventory identification and visibility — 100 percent reads, adjustable read ranges, an update rate of over 5,000 tags per second, and superb performance in industrial multipath environments. Sapphire VISION outperforms in

environments where other RFID solutions fail or simply cannot scale.

The VISION V652 RFID Reader is housed in a 6x3.25x2-inch module and weighs 15 ounces. The reader, which can be wall or ceiling mounted, contains a highly sensitive UWB receiver which detects and decodes tag data, sending the information to end-user applications via standard Ethernet. Tag information can be displayed via a graphical user interface, or data can be directly streamed to a client application.

First shipments of the Sapphire VISION V652 are scheduled to begin on December 15, 2006. A bundled package of a VISION V652 reader, software, and 50 assorted asset tags is available as a starter kit.

MachineTalker iRFID reusable security monitor for shipping containers and pallets

MachineTalker Inc., a developer of smart wireless security networks, has completed its first release of the iRFID, an Intelligent RFID for placement inside shipping containers and on shipping pallets to keep track of and report any disturbance or environmental change.

When interrogated, these Talker-based units can report details about the shipment including freight manifest, consignment, ownership, source, and contents, along with a time-stamped event log. These first units are sealed for use onboard pallets of explosive materials to maintain inventory of munitions. The iRFID can reside in storage for long periods of time while reporting periodically to monitors in the area.

This particular unit has gained HERO approval so that it can be used to monitor "controlled" explosives. Other product variations will be housed in NEMA enclosures for location in dangerous atmospheres, as well.

The company's wireless security products are for use in unattended remote applications where intelligence is needed to monitor the environment for harmful changes, log events in real time, make decisions, and report details about the items being monitored. MachineTalkers automatically form a mesh network with nearby units and may share information with adjacent Talkers by radio and with Wide Area Networks like the Internet.

Priced at $300 in small quantities, every unit can be programmed for one type of shipment and then reprogrammed for another application. Price is subject to quantity purchase discount for fleets of shipping containers or large numbers of pallets where cargo is to be identified and monitored. In one application, the purpose of a smaller version will be to keep a history of temperature change in a carton of smallpox vaccine to assure efficacy over time in transit and in storage.

HERO stands for Hazard of Electromagnetic Radiation to Ordnance, and is an assessment process that seeks to assure that any product that transmits radio frequency electromagnetic energy is not capable of accidental actuation of electro-explosive devices like fuses, or of otherwise electrically activating ordnance.

NEMA, the National Electrical Manufacturer's Association, provides standards to be met by electrical equipment in harsh environments to enable consumers to select from a range of safe, effective, and compatible electrical products.

RF Code expands 802.11 wireless network capabilities for its active RFID readers

RF Code Inc., a provider of real-time location and sensor (RTLS) solutions, announced the certification of the WiBox wireless device server from Lantronix and the availability of an integrated solution to enhance its 303MHz and 433MHz active RFID readers with 802.11b/g wireless network capabilities.

"The Lantronix wireless device server is the perfect add-on option for our enterprise asset tracking customers," said Dr. Nissim Ozer, chief technology officer of RF Code. "Asset data, which is monitored by our secure, low frequency infrastructure, can easily be backhauled over existing corporate IT backbones. It is ideal for asset tracking software applications and security system installations, where running network cable is not feasible or cost-effective."

Mantis II readers are key elements within the company's TAVIS platform. RF Code's active RFID tags and readers have the collective ability to relay asset data directly to corporate networks, allowing for enterprise solutions to be developed without impacting the existing IT architecture.

RF Code's RTLS solution, combined with the Lantronix device server, is faster to deploy in enterprise settings with 802.11 Wi-Fi networks. The Lantronix WiBox unit has been tested and certified by RF Code to operate with its readers.

"This enhanced offering allows flexible asset tracking solutions without disrupting existing enterprise networks," said Peter Sola, executive vice president of RF Code. "Our 303MHz and 433MHz tags and readers enable high-performance, real-time location of people and assets without taxing enterprise IT infrastructures or requiring installation of new 802.11 access points."

RF Code's 303MHz and 433MHz systems feature high-performance, low-cost active RFID tags which beacon their locations and optional sensor data at programmed intervals.

Location and condition data are processed by software programs which filter and consolidate information that can be processed by corporate databases and security systems. RF Code's Mantis product line operates at frequencies which are optimal for the ability to propagate through materials, walls, and other architectural elements.

The new, enhanced dual-port Lantronix WiBox provides 802.11b/g wireless capabilities for high-bandwidth data throughput. The WiBox also provides a unique bridging capability which allows an Ethernet device, such as the Mantis reader, to be connected to an 802.11 wireless network. The WiBox is an industrial-grade product with a high operating temperature range and ruggedized enclosure.

MTI adds new Low Axial Ratio RFID reader antennas to product portfolio

MTI Wireless Edge, a developer of flat panel antennas for RFID and fixed wireless applications, announced the addition of their new Low Axial Ratio RFID reader antenna range to their large portfolio of high-performance and cost-competitive RFID antennas. This new family includes six antennas covering the three RFID UHF bandwidths:

- MT-242032 (RH or LH) 865-870MHz
- MT-262013 (RH or LH) 902-928MHz
- MT-262017 (RH or LH) 950-956MHz

The small footprint (190x190mm) and very light weight (0.8Kg) of this new Low Axial Ratio RFID reader antenna range eases installation, making it the ideal solution for a wide range of applications.

"As a leading RFID antenna developer we are committed to delivering antenna solutions that meet the needs of the market. In this instance we focused on size reduction and high-performance," said Dov Feiner, CEO and president, MTI Wireless Edge Ltd.

"This antenna provides the ideal solution for RFID reader applications and we expect it to become one of the best selling antennas in the RFID industry."

These antennas, designed to enhance the single port reader's performance, are not only the smallest and lightest antennas available, but also deliver the highest performance.

Q-Track demonstrates novel indoor wireless tracking product

The Q-Track Corporation demonstrated the first indoor wireless tracking system based on Near-Field Electromagnetic Ranging (NFER) technology at the IdTechEX Active RFID Summit in Atlanta, Georgia. Q-Track's QT-400 Starter Kit tracked a person carrying a small NFER Tag throughout the exhibit hall at the conference.

With a typical operating frequency around 1MHz, NFER technology uses the near-field properties of long-wavelength, low-frequency signals to locate tags to a precision of a couple feet at ranges of 150 feet or more. NFER technology excels in complicated reflective indoor environments where UHF, microwave, and other high-frequency technologies have difficulty. The Department of

Homeland Security, the Army, and the National Science Foundation all supported Q-Track's development of NFER technology.

QT-400 Starter Kits enable vendors interested in real-time location systems (RTLS) to assess whether NFER technology fulfills their requirements. Two early adopters of NFER technology are currently beta-testing Starter Kits, and Q-Track has a backlog of orders for these Starter Kits. Go to http://www.q-track.com/Q-Track2006.wmv to see a short video on NFER technology.

PARTNERSHIPS

Compsee and System Concepts form an RFID solutions alliance

Compsee Inc., a systems integrator for the automation of data collection processes performed by the mobile workforce, and System Concepts Inc., an RFID software application and solution provider, announced a strategic alliance to jointly promote System Concepts' RFID application and solution development suite, TraxWare, as a solution for its RFID mobile terminal offerings and closed-loop solutions from Symbol Technologies.

TraxWare enables reliable RFID applications to be configured from XML and put into production quickly, like publishing a Web page instead of writing time-consuming, error-prone, custom code. TraxWare supports fixed, mobile, and printer platforms; connects with popular databases and host applications; and comes with a large library of pre-built, field-proven applications for manufacturing lines, dock doors, lifts, asset tracking, conveyors, and more.

"System Concepts RFID software applications and solutions are a perfect match for our customer needs," Billy Graham, vice president of marketing for Compsee, said. "Utilizing RFID will allow many users of our mobile and portal application solutions to operate in real-time, on virtually any warehouse process. This will dramatically increase productivity, while eliminating costly inventory, order-picking and shipping errors."

The state-of-the-art Windows RFID Mobile-enabled terminals and fixed readers from Symbol Technologies that run the TraxWare software will deliver to customers opportunities to optimize and enhance mobile and portal applications within their warehouses.

TraxWare enables Compsee to deploy RFID integrated solutions quickly utilizing RFID mobile and fixed terminals from Symbol Technologies without custom software development. TraxWare RFID products reduce risks of operational problems in RFID deployments with easy-to-configure modules and RFID diagnostic tools. According to L. Allen Bennett, president and CEO of System Concepts, "We are pleased to be working with the Compsee Solutions Group. Their intimate industry and application knowledge is a good fit for our process control and mobile RFID applications and solutions."

TraxWare is a modular software solution that enables functional RFID operations between enterprise systems and a company's network edge. All modules are designed for maximum compatibility and interoperability across Symbol's full product offering, including mobile and fixed readers and RFID tags.

Onnitech and SkyeTek partner to deliver EPC-based traffic and parking enforcement solution for government of South Korea

SkyeTek Inc., a provider of embedded RFID reader technology, and Onnitech Ltd., one of Korea's leading providers of finished RFID readers, announced availability of the uWiz-4000 handheld reader designed for traffic and parking enforcement. Due to severe traffic and difficult parking conditions, the Korean government has instituted an RFID-based rationing program that limits when owners can drive their vehicles. Onnitech's uWiz-4000, with integrated wireless network connectivity, will be used by government personnel to determine whether automobiles comply with the rationing schedule.

"Korea is a world leader in its implementation of wireless technology into

everyday life," said Rob Balgley, CEO of SkyeTek. "The Korean government's use of RFID to load balance commuters between automobiles and mass transit will reduce air pollution, time spent commuting, and expenditures on road/parking infrastructure. This use case is one of the many practical and powerful applications of RFID where a complex, labor intensive process is greatly automated and simplified."

Via an EPC Class 1 Gen2 tag affixed to each vehicle, the Korean government specifies certain days when owners are allowed to drive their automobiles within city limits. To enforce the program, government personnel will use Onnitech's uWiz-4000 to read tags on parked cars to determine whether or not they are in compliance. The identifiers in tags of noncompliant vehicles are sent to headquarters via wireless backhaul to the enforcement agency's network where processing of the infraction occurs.

Based on SkyeTek's M9 UHF module, the uWiz-4000 provides tag support for EPC Class 1, Gen2, and ISO 1800-6B standards. With power efficiency that enables the reader to last up to a week without recharging, the uWiz-4000 provides parking personnel with reliable reads at ranges up to 1 meter. The handheld device is the size of a small writing tablet, has a foldable antenna, and weighs just over half a kilogram, making it easy for officials to transport it for use across the city.

"SkyeTek's Advanced Universal Reader Architecture is a tremendous advancement in RFID reader architecture and design," stated Mr. Kong-Sik Lee, CEO, Onnitech Ltd. "It is an enormous task for the Korean government to track commuting patterns of its citizens, and we needed a partner who could help us develop the right solution for such an ambitious project. The M9 UHF SkyeModule was the only reader module that allowed us to achieve our aggressive cost, space, power, and performance requirements."

The M9 UHF SkyeModule is the world's smallest, least expensive EPC Class 1 Gen1/2, and ISO 18000-6B/C OEM reader module that meets regulatory compliance requirements for the world's major markets, including North America, Europe (ETSI 302 208), Korea, and Japan. Approximately half the size of a business card, the M9 was designed for embedded UHF applications such as item-level inventory, anticounterfeiting, access control, handheld reading/encoding, and printing.

The M9 offers support for anticollision, dense reader mode, security, and a broad array of EPC Class 1 Gen1/2 and ISO 18000-6B/C tags, including soon-to-be-released tags based on new Gen 2 silicon. As tag memory increases, customers will be able to leverage ReaderWare Security to provide privacy protection, antitampering, and anticounterfeiting on generic tags without incurring additional cost. These features come standard in the M9, which is offered as a single, global SKU allowing the factory or end-user to set which country mode it should operate in.

Customers can purchase SkyeTek's M9 as a module or ReaderWare license. Licensing also provides customers with access to the M9 ReaderDNA reference design, allowing them to integrate the technology directly into their product design and realize 40-70 percent cost savings as a result.

RF Code extends its global reach through an agreement with Champtek

RF Code Inc., a provider of real-time location and sensor solutions, announced that Champtek will distribute RF Code's active RFID products to the Asian market. Champtek was the first distributor to obtain Type Approval (Type A) Certification from the Taiwanese government to import and sell industrial appliance products in the country.

"The active RFID market presents a tremendous opportunity for increased growth and exceptional return on investment in the Asian market," said Jon Wang, technical sales manager, RFID division, of Champtek. "We selected RF Code and its Tavis Solutions Platform for its superior performance and strong

customer support, which allows Champtek to provide its customers with the highest quality RFID solutions available."

RF Code's Tavis Real-Time Location and Sensor (RTLS) solutions were selected by Champtek for having the best granularity, the highest resolution, and the ability to be integrated into handheld readers. RF Code's low-priced Automatic Identification and Data Collection (AIDC) technology is being resold by Champtek and will soon be embedded in Champtek products. These solutions are being used in a wide variety of industries from mining and construction to the health care industry.

"RF Code's entrance into the Taiwanese and Chinese markets through Champtek, gives us the opportunity to introduce our complete Tavis RTLS solutions to a valuable new market," said Peter Sola, RF Code executive vice president. "We are partnering with Champtek because of their demonstrated success in supporting the local needs of the market."

SkyeTek signs value-added reseller to serve growing RFID reader markets in Europe

SkyeTek Inc., a provider of embedded RFID reader technology, announced the addition of a value-added reseller (VAR) that will provide the company with a specialized sales, systems integration, and support presence in Spain and Portugal, one of the largest European markets for RFID. NextPoint Solutions will carry SkyeTek's M1, M2, and M9 HF and UHF reader modules. These reader modules are based on SkyeTek's simple common architecture and powerful ReaderWare software.

"We are very excited to be working with NextPoint Solutions as a partner to expand our presence in Spain. The adoption of embedded RFID is growing in Europe due to use in applications such as transportation, patient safety, item-level inventory, patron loyalty, and contactless payment," said Rob Balgley, CEO of SkyeTek. "We believe that our M2 HF and M9 UHF reader modules are well positioned to deliver against the unique technology requirements of each of these applications."

The Advanced Universal Reader Architecture (AURA) is the common architectural foundation of both the M2 (HF) and M9 (UHF) SkyeModules. AURA allows the M2 and M9 to present identical software, electrical, and mechanical interfaces so that applications can switch between HF and UHF without redesign. These modules lead their respective markets in reader price-performance due to AURA's ReaderWare software layer. ReaderWare provides advanced reader intelligence that not only delivers adaptive behavior, broad tag support, and tag heuristics, but also delivers state-of-the-art security. ReaderWare also performs functions traditionally performed in hardware, allowing the M2 and M9 to achieve global regulatory compliance in a single SKU as well as uncommon efficiencies in cost, space, and power.

"With the addition of SkyeTek's OEM reader modules to our catalogue, NextPoint is now able to approach many different customers with a strong proposal to add RFID capabilities to their manufactured products," said Tomas Pardo, general manager of NextPoint Solutions. "The combination of SkyeTek's powerful reader modules and NextPoint's deep systems knowledge, provides manufacturers with an easy to integrate RFID solution, complete with full services and support."

SkyeTek offers its technology to OEM customers or distributors as reader modules, which include a ReaderWare license, or as ReaderWare software licenses. Licensing provides customers with access to ReaderDNA reference designs, allowing them to integrate the technology directly into their product design and realize 40-70 percent cost savings versus a typical reader module.

MERGERS AND ACQUISITIONS

Digital Angel Corporation acquires assets of McMurdo marine electronics business

Digital Angel Corporation announced that Signature Industries, its London-based

subsidiary, has entered into an agreement to acquire certain assets and customer contracts of McMurdo Ltd., the UK's premier manufacturer of emergency location beacons, from Chemring Group PLC. Digital Angel, a provider of the development and deployment of sophisticated RFID and GPS technology, will purchase McMurdo for approximately US$6.2 million, with additional deferred payments ranging from US$0 million to US$3 million, dependent upon performance of the business following the sale.

"With a worldwide distribution network of approximately 60 outlets, McMurdo offers a vibrant and diverse customer base," said Kevin McGrath, CEO of Digital Angel. "This acquisition will more than double the revenue base of our survival radio business and significantly broadens our product offerings in both the maritime and military sectors. We're confident this acquisition will prove to be one of Digital Angel's most important and strategic moves."

Both Digital Angel and McMurdo have long histories of supplying critical safety and location products.

Through the SARBE division of Signature Industries, Digital Angel is a provider to the military sector with survival radio technology, while McMurdo holds a definitive edge in the maritime industry. Together, these companies will become the premier manufacturer of Personal/Emergency Locator Beacons and enjoy a considerable technological advantage over their competitors.

For nearly seven decades, McMurdo has distinguished itself as a leader in the development and manufacturing of safety equipment technology. Its products, including the original EPIRB (Emergency Position Indicating Radio Beacon) and the first GMDSS (Global Maritime Distress and Safety System) approved Search And Rescue Transponder, have become standard, lifesaving equipment on many recreational, commercial, and military marine vehicles. In 2000, McMurdo demonstrated the versatility of its technology, successfully launching its first PLB (Personal Locator Beacon) for use on land, sea, or air. The company continues to lead the way in the functionality and accuracy of emergency location beacons.

Emergency Locator Beacons represent a core competency and key growth market for Digital Angel and its subsidiary, Signature Industries. Impending changes to the COSPAS-SARSAT satellite monitoring system mean much of the equipment currently in service will require replacement by February 2009. McMurdo and SARBE, with its improved range of radios such as the SARBE G2R and the SARBE 6-406, are uniquely positioned to exploit these opportunities in their respective markets.

The SARBE Division of Signature Industries manufactures a complete line of military search and rescue beacons and has worked closely with the Royal Marine Air Force for more than 30 years and the UK Ministry of Defense for more than 50 years. The acquisition of McMurdo's technology and its manufacturing infrastructure should significantly strengthen Digital Angel's position in the Locator Beacon Industry.

BUSINESS

IIJ and BEA Japan to provide networked RFID platform for edge-to-enterprise implementation

Internet Initiative Japan Inc. ("IIJ"), one of Japan's leading Internet access and comprehensive network solutions providers, announced an agreement with BEA Systems Japan, Ltd. ("BEA Japan," a subsidiary of BEA Systems Inc.), a provider of enterprise infrastructure software, to create an EPCglobal-compliant system environment using the network technology and middleware products of both companies, with the end goal of providing "Networked RFID Platform" environment.

The scope of this collaboration includes the following:

1. Construction of a Networked RFID Platform environment with the IIJ EPC Network and BEA WebLogic RFID products — The two companies have established interoperability between the IIJ EPC Network Service and the

BEA WebLogic RFID Edge Server/WebLogic RFID Enterprise Server, and constructed a system environment using these products. This has enabled the implementation of network-based RFID throughout both intra- and inter-company business systems, creating an RFID system that meets the needs of the enterprises.

2. Co-sponsorship of a demonstration environment at HP RFID Noisy Lab Japan — Both IIJ and BEA Japan will install their products in RFID testing facilities, providing an opportunity for customers to test and experience RFID systems using the EPCglobal Network. As a first step, the two companies plan to make a demonstration system available at the HP RFID Noisy Lab Japan.

3. Joint proposals aimed at promoting RFID platforms using the EPCglobal Network — Based on the pilot system mentioned above, both companies will adapt more RFID products to this environment to create an open, standard platform and promote the diffusion of this technology among systems integrators who construct systems for the Networked RFID Platform environment.

For enterprise customers, the two companies will provide high-grade RFID solutions using the EPCglobal Network by leveraging IIJ's advanced network technology and BEA Japan's wealth of experience in enterprise system service-oriented architecture (SOA) installation, and their combined expertise with the EPCglobal.

Future plans include the building and refinement of IT infrastructure to integrate RFID systems with existing corporate systems by providing a common RFID platform using products from both companies.

RFID implementation is progressing rapidly in Japan, particularly in the areas of manufacturing and logistics. The market for RFID use is forecast to expand as it evolves from a departmental or business unit tool to an intra- and inter-company application spanning the globe.

Compliance with international standards and the use of open networks will be essential to achieving real-time sharing of information between all locations within a company, national and regional, and between companies.

Both IIJ's EPC Network Service and BEA Japan's WebLogic RFID products are designed to operate on an open platform and provide leading-edge functionality on a global scale through their compliance with the international EPCglobal standard.

X-Change Corporation establishes wholly owned subsidiary, OAG Systems Inc.

X-Change Corporation announced that it has incorporated a wholly owned subsidiary, OAG Systems Inc. Michael Sheriff, Scott Thompson, and Ivan Chow will serve as initial directors and officers of the new subsidiary. AirGATE Technologies Inc., a wholly owned subsidiary of the X-Change Corporation, will transfer certain technology and intellectual property to the new company.

"With our increasing emphasis and commercialization of our oil industry technologies using wireless and RFID, we felt that a dedicated company focusing on this growing market made sense for the X-Change Corporation and AirGATE Technologies Inc.," stated Michael Sheriff, president and CEO of X-Change Corporation.

RF Code sponsors McMaster University's RFID lab

RF Code Inc., a provider of real-time location and sensor solutions, announced that it is sponsoring McMaster University's new McMaster RFID Applications Lab (MRAL), which was formed to serve as the cornerstone for applications-oriented RFID research and development.

"Our participation in the MRAL is an investment in the future of RFID as it will serve as a basis for providing research and recommendations for the continued growth of wireless location and asset management technology," said Peter Sola, RF Code executive vice president. "By sponsoring this lab, the industry will receive vital feedback to aid in the

growth and market expansion of Real-Time Location Systems (RTLS)."

The first project of the lab will show how Canada's Hamilton Health Sciences Corporation can leverage RFID to track hospital assets. The lab is working with both public and private organizations to provide research services, proof-of-concept facilities, advisory services, and training for both students and professionals.

"The support of a leading provider of real-time location and sensor solutions such as RF Code is an invaluable enabler for MRAL," said Rafik Loutfy, director, Xerox Centre for Engineering Entrepreneurship and Innovation, McMaster University. "Their support in assisting the lab will help in developing much needed research in emergent RFID technology and its applications. It also provides the necessary expertise and leadership to sustain this growth."

The lab stems from the Xerox Centre for Engineering Entrepreneurship & Innovation (XCEEI) at McMaster. Pankaj Sood, commercialization manager at MRAL and a graduate of the university's master's program offered through XCEEI, originally identified the need and potential for the lab in his thesis research. MRAL is located at McMaster Innovation Park in Hamilton, Ontario.

NCR puts manufacturers on fast track to meet retailers' RFID mandates

NCR Corporation announced an out-of-the-box solution that enables manufacturers to quickly and readily meet retailers' mandates for delivering merchandise with RFID tags at the case and pallet levels.

The package, NCR RFID Retail Compliance, provides companies with all the components needed to install and implement an RFID tagging solution in a matter of hours. The solution consists of NCR application software, an RFID printer, a barcode scanner, and a startup supply of RFID labels that comply with the EPCglobal Generation 2 (Gen2) standard. Also included is a year of software telephone support.

"More retailers are mandating RFID tagging for more products. As a result, many consumer goods manufacturers are telling us they want this capability without spending the time and money needed to implement a custom process," said Ken Hamlin, general manager of NCR's Automatic Identification and Data Collection (AIDC) Solutions Group. "NCR RFID Retail Compliance delivers the cost-effective, 'ready, set, go' solution companies need – from an experienced and trusted partner."

The software component of NCR RFID Retail Compliance is built with the proven NCR TransitionWorks development platform, which has been deployed at hundreds of sites worldwide. The Gen2 labels, from NCR's Systemedia Division, provide close to 100 percent utility in finished tag product.

NCR RFID Retail Compliance includes installation wizards that eliminate the complexity of configuring printers, software, and tags, allowing users to avoid costly project management or other custom services. In addition, the NCR solution can be readily upgraded as operational requirements grow and the number of products that require tagging increases.

NCR RFID Retail Compliance is one of the offerings in NCR's suite of AIDC packaged solutions designed to help businesses address strategic operational objectives and achieve a solid return on investment.

MARKET INTELLIGENCE

Spending on contactless payments hardware and software to reach $800 million by 2011, according to ABI Research

With adoption driven by some of the world's largest card associations and banks, wireless operators, and merchants, spending on contactless payments hardware and software will reach $870 million by 2011, up from just $260 million in 2006, amounting to a compound annual growth rate of 27 percent, according to a new study from ABI Research.

"Initial contactless payments deployments have already shown the ability to speed transactions and capture previously cash-only transactions for financial service networks," said senior analyst Jonathan Collins.

Two key applications are now driving adoption: proprietary transportation ticketing; and open credit, debit, and e-purse payments tied to financial service networks. At present, transportation ticketing represents the majority of contactless payment adoption around the world, but that position will be overtaken by adoption of open systems payments within the next few years.

However, uptake is taking place at varying rates across regions, national markets, and market segments, as contactless payments are added to existing payment networks and environments. "In North America, open system payments are driving the contactless adoption," said Collins.

"In Europe contactless ticketing systems are spurring interest in contactless payments, but it is in Japan and South Korea that contactless technology is making the greatest headway. Built on the foundations of contactless transportation ticketing and with the additional boost from contactless payment-enabled mobile handsets, these markets are leading the way in realizing the potential for contactless payments."

Elsewhere, while mobile handsets will develop to enable contactless payments, ongoing debate over how payment applications will be deployed and managed on wireless handsets has delayed the rollout of mobile handset contactless payments in the US and Europe.

Such hurdles slow contactless technology's evolution from promising first deployments to a widely used, mainstream payment technology.

Technology and business issues must be resolved to see open systems installed on mobile handsets and accepted at existing contactless-equipped transportation installations. In addition, consumers have to be comfortable with the use of the technology and confident in the security of contactless payments.

Passive RFID label prices and volumes in a vicious circle, says ABI Research

The market for passive RFID labels — particularly UHF labels — has not yet grown as stakeholders in the industry had hoped. According to a new study from ABI Research, the reason these core components of RFID tags have failed to achieve their expected potential is the relationship between prices, volumes, and the business case for RFID.

In a classic "vicious circle" dynamic, production costs for UHF labels (hence for Gen2 passive labels) are still at levels tending to inhibit the high-volume deployments that would provide economies of scale. Research analyst Robert Foppiani said, "At current prices, many end-user companies in the retail/CPG supply chain struggle to determine a compelling business case for RFID. Those companies that have high value, high risk goods are often able to find a business case to justify the investment in RFID passive labels at current prices. But many members of the value chain are operating on thin margins, and most are unwilling to drop prices any further until there is much greater volume."

So label vendors are trying a variety of tactics to wring every last cent out of the cost of their products. Alien, Avery Dennison, Texas Instruments, and NXP hope that their strap technologies will do the trick; multiple vendors are hoping to shrink the size of an IC to obtain more units from a single wafer.

A number of EPC Gen2 RFID vendors are engaged in "loss-leader" activities, offering labels at unsustainable prices in an effort to gain market share. Eventually, some will drop out of the running, or will find niche markets where their products can find a role. ABI Research believes that cost reduction tactics will not have a short-term effect on market volumes. The substantial price cuts seen in the past year were necessary to attract end-users complying with mandates. Looking forward, future vendor attempts at

lowering production costs will make more sense as higher volumes are reached. Users will proceed cautiously case-by-case, and volumes will rise slowly and steadily rather than dramatically.

The total North American RFID market for manufacturing and logistics generated $74.8 million in 2005

Research and Markets has announced the addition of "North American RFID Markets for Automotive and Aerospace & Industrial Manufacturing" to their offering.

There is an increasing emphasis on evolving demand for responsive systems, and this necessitates integrating manufacturing applications with ERP platforms and supply chain systems. The technology has significant potential for the manufacturing and logistics sectors to identify inventory (inbound and outbound), work-in-progress, critical assets, spares, tools, and high-value components. RFID-enabled logistic structures ensure multiple data capture points, thereby actualizing true visibility into the movement of inventory. The technology supports technical requirements of increasingly global logistic and distribution structures that necessitate local responsiveness along with global interoperability. RFID possess immense potential in this regard, provided market participants move towards deployment and increased integration.

The total North American RFID market for manufacturing and logistics generated $74.8 million in 2005, which is the base year for the purpose of this research service. The market is expected to grow at a compound annual growth rate (CAGR) of 19.6 percent over the forecast period to reach revenues of $261.8 million in 2012. The automotive and industrial vertical segment markets account for the highest percent of market revenues, with 39.0 percent and 37.0 percent, respectively, during 2005, which was the base year of the research. The split of revenues by geographic regions for the total market revenues indicates concentration of the present market potential within USA. The region accounted for 57.3 percent of the market revenues during the base year.

Expert Frost & Sullivan analysts thoroughly examine the following market sectors in this research:

- Automotive
- Aerospace
- Industrial
- North America — USA, Canada, and Latin America

This Frost & Sullivan research service, "North American RFID Markets for Automotive and Aerospace & Industrial Manufacturing," provides an overview of the revenues and growth rates for the total North American market and each vertical and geographic segment, along with an analysis of the market and technology trends, end-user application trends, and the competitive landscape.

This analysis is available through their AutoID and Security Growth Partnership Services program. With this program, clients receive industry-leading market research such as this, along with technical and econometric data and many interactive features including Analyst Inquiry Time and Client Councils.

For more information visit http://www.researchandmarkets.com/reports/c46316

Government initiatives to create demand for RFID tags in North Asia

Research and Markets has announced the addition of "North Asia RFID Tags Markets" to their offering.

This Frost & Sullivan research service provides an in-depth analysis of the North Asian tags market trends, technology, and forecasts by application and country. In this study, Frost & Sullivan's analysts thoroughly examine the following segments:

- Security/Access control
- Manufacturing and logistics
- Transportation
- Animal tracking

The development and deployment of RFID technology in China, South Korea, and Japan is growing rapidly. The applications of the

RFID tags in different verticals are progressing differently, and the market share contributions vary across the countries, although they all are in the growth stage of the market cycle. With increasing government support for the technology, the usage of RFID is expected to see phenomenal growth in the coming years, with greater initiatives by the industry participants as well, according to the analyst of this study. The Auto-ID Labs in China, South Korea, and Japan are initiating joint research on RFID topics ranging from RFID chips to middleware.

In addition to the technological advancement, government support is also likely to boost sales of RFID tags. Governments in China, South Korea, and Japan are aggressively promoting the RFID tags in the society by forming RFID information centers and hosting conferences and summits in order for the companies to better understand the latest developments in RFID technology and its applications. This includes the RFID China Alliance, the South Korean Ubiquitous Sensor Networks (USN), and Hibiki to make cheaper RFID tags in Japan.

China is considered to be the largest manufacturing center in the North Asian region, followed by Japan and South Korea. The increasing demand of commodities, especially in China, may lead to high consumption of RFID tags in the next few years. RFID tags play a crucial role in international commerce and will become an important technology trend in China, South Korea, and Japan. These countries understand the power of RFID tags for improving the efficiency of manufacturing, supply chain operations, and data collection. Given the enormous variety of possible applications and the potential to drastically reduce supply chain costs, the market is expected to grow exponentially in the next few years.

China has also started to move ahead with the development of RFID standards, and is poised to become the largest RFID tags application market in the world. This is due to the fact that there is huge manufacturing capital in the country. China is not only one of the world's important manufacturing and assembling bases, but, as the third-largest trading country, is a key consumer market, as well, explains the analyst. With some companies in these countries being the direct suppliers to Wal-Mart, they need to tag all the products that they ship to this enterprise.

Analyze the world RFID printing solutions market

Research and Markets has announced the addition of "World RFID Printing Solutions Market" to their offering.

The research service analyzes the world RFID printing solutions market. Growth projections and revenue forecasts have been analyzed across geographical segments including Americas, EMEA, and Asia-Pacific markets. The total market analysis includes key drivers, restraints, challenges, analysis of the competitive structure and value chain, pricing, technology, and distribution trends. Company profiles of key market participants and a technical overview of the impact of printed RFID electronics have also been analyzed within the scope of the study.

The Frost & Sullivan research service provides an overview of revenues and growth rates for the total market and each geographic segment, supplier value proposition from adoption of RFID technology, market and technology trends, and an analysis of demand for each geographic segment. In this research, Frost & Sullivan's analysts thoroughly examine the following geographic markets:

By Geographic Region:

- Americas (North America & Latin America)
- Europe, Middle-East and Africa
- Asia Pacific

By Technology:

- RFID

The following technologies are covered in this research:

- RFID Printers and Encoders: Printer/ Encoder application solutions encompass

different functions including sigulation/simulation and testing of each smart label (before and after encoding), diversion and communication of rejected tags, and coordination with other devices such as robotics extensions and plates. The primary functions of RFID printers include encoding specific numbering sequences, determining the viability of the tag, and printing of human-readable content.

- Smart Labels: Smart labels include pressure-sensitive face-stock that is printed with human-readable data, liners, and RFID inlays consisting of a microchip and antenna. The placement of the inlay in the label determines the choice of printer, since inlay positioning requirements differ across printer manufacturers.

Continuous increase in the number of open-looped pilots and deployments requiring encoding capabilities is providing significant momentum for the growth of the global RFID printers and encoders market. Mandate-driven markets initially triggered off a slap-and-ship response, and the immediacy of the mandate deadlines resulted in most suppliers applying a tag to the pallet/case, encoding the tag further along the supply chain. The low value-add from the slap-and-ship approach ensued the evolution of barcode labels to include RFID chips encoded by barcode printers that supported the new RFID technology. Applications and vertical markets that have traditionally employed barcodes, and, looking to adopt RFID, are expected to invest in RFID printers as the first step toward such a transition.

However, a crucial challenge is that the technology is considered disruptive since it entails reengineering existent processes to ensure complete visibility. Process reengineering efforts involve significant costs, representing a key challenge to end-users who are already faced with the relatively high costs of RFID hardware investments. Moreover, cost pressures of employing smart labels are likely to be a key restraint among end-user segments that have traditionally not employed any form of automatic identification and data capture (AIDC) technology, notes the analyst of this research service. Markets such as retail that have relied on technology innovations to gain a competitive advantage are expected to witness an easier transition toward RFID technology and smart labels.

With RFID being considered disruptive to existing systems and processes, smart labels are making the migration from legacy systems a lot easier. Smart labels have gained increased significance, since they provide the option of combining human-readable data with RFID capabilities. The printer, therefore, obviates the necessity for a complete replacement of existing barcode systems and overcomes challenges of additional logistics and investment costs. The growth of smart labels has increased the production of printers/encoders that support in-house label production and changing application needs. Vertical markets that are slow adopters of RFID technology represent key opportunities for smart label structures since the migration strategy is expected to be least disruptive.

Geographically, the North American region is expected to hold the largest percent of revenues in the short and medium terms. While this is largely due to the relatively mature market and high levels of interest in RFID technology among end-users, the potential for tagging volumes is expected to shift toward manufacturing sources within the Asia-Pacific region in the long term. Printer/encoder applications are likely to witness an increased demand within Asian manufacturing hubs that expect an impact from the retail driven mandates in the North American and European markets. Overall, market participants expect demand to improve toward the last two quarters of 2006, and RFID product line losses of 2005 are likely to be minimized in 2006, says the analyst. The compound annual growth rate (CAGR) for the printers/encoders market is higher than average RFID industry projections primarily due to the nascence of the market and the significantly smaller overall market size in the present context.