

RFID News Roundup

Alien unveils faster encoding scheme; ADT introduces new RFID mobile cart; Tyco Electronics introduces passive RFID stands with integrated readers and antennas; tagmakers roll out new UHF, HF inlays; Atmel launches LF RFID microchip; Fluensee offering asset-tracking startup kit; American RFID Solutions upgrades RF tool; IBM upgrades Premises Server.

March 30, 2007—The following are news announcements made during the week of March 26.

Alien Unveils Faster Encoding Scheme

Alien Technology says it developed a new process by which RFID encoders can write data to an Alien RFID tag and lock that data in approximately 23 milliseconds, which the company says is 10 times faster than prevailing Gen 2 RFID tag programming times. Alien says this custom tag-encoding command, which it developed using a custom-command specification written to the EPC Gen 2 standard, writes and locks data in a single cycle, whereas the standard Gen 2 write command must be repeated 12 times for a total of 12 distinct write cycles. The company says it developed the faster encoding scheme to address concerns that writing to RFID tags integrated into packaging materials could slow down packaging or manufacturing lines. Alien is making the new encoding process, called LoadImage, available to any manufacturer of RFID interrogators, so that those companies can configure their readers to take advantage of the higher encoding rates when writing data to Alien Gen 2 tags (which contain Alien's Higgs Gen 2 chip). The company has also announced that its RFID Solution Center in Dayton, Ohio, has received EPCglobal's Performance Test Center Accreditation Mark, certifying that the center has successfully completed the EPCglobal Performance Test Center audit.

ADT Introduces New RFID Mobile Cart

ADT Security Services, a part of Tyco Fire & Security, has introduced a radio frequency identification mobile cart designed to provide mobile RFID reading capability within storage room and warehouse environments. The company says the mobile cart lowers deployment costs and increases inventory efficiencies by bringing RFID readers to the tags instead of passing tags through many stationary readers installed at the warehouse doors. The Sensormatic RFID Mobile Cart is equipped with an EPCglobal Gen 2 UHF RFID reader and has antennas attached to a 180-degree rotating extendable tower. The reader is powered by an on-board battery that lasts up to eight hours. The cart is designed to read RFID tags as workers push it through a facility. The antenna tower extends up to 16 feet, reaching standardized shelving used in warehouse situations, and the antenna tower can be expanded and collapsed on demand.

Tyco Electronics Introduces Passive RFID Stands with Integrated Readers and Antennas

Tyco Electronics expanded its RFID product portfolio with two new integrated antenna and reader systems for passive RFID systems from its M/A-COM division. Designed to be used in a variety of applications, the M/A-COM MAAN-000176-AT0000 and MAAN-000177-AT0000 RFID stands can be mounted on walls or floors. Both stands come integrated with a ThingMagic Mercury4 reader and two bi-static antennas on the front sides. The M/A-COM MAAN-000176 is the North American frequency band floor-mount RFID stand and operates in the 902-928 MHz frequency range. It weighs 51 pounds and measures 81.5 inches tall, 15.2 inches wide and 7.5 inches in diameter. The MAAN-000177-AT0000 is the European/Indian frequency-band floor-mount RFID stand. It operates in the 865-868 MHz frequency range and is 207 centimeters high, 38.6 centimeters wide and 19 centimeters in diameter. It weighs 23.2 Kg. Both feature full-integrated portals

including antennas, readers, status lights, power management functions and a computer interface. Available now, pricing depends on configuration; units are typically customized for specific applications and customer requirements.

Tagmakers Roll Out New UHF, HF Inlays

Checkpoint Systems, a manufacturer and marketer of RF- and RFID-based solutions for identification, tracking, security and merchandising applications, is offering two new EPC Gen 2 labels, available in 2-by-4-inch, 4-by-4-inch and 4-by-6-inch sizes. The labels are designed for supply-chain applications. The inlays contain a new chip-and-strap product called CheckSi, co-created by Checkpoint Systems and Texas Instruments, which provides the chip used in the inlays. The CheckSi straps enable Checkpoint to attach the straps to a range of antenna designs, at high-speeds and without modifications to the strap. Checkpoint says the CheckSi strap can be made with Gen 2 chips from any manufacturer. Checkpoint is selling finished labels with the CheckSi-based inlays now, in production quantities, but has not revealed pricing. A number of other tagmakers have also introduced high-frequency inlays, using Texas Instruments' HF chips. UPM Raflatac is using TI's 256-bit ISO 15693 silicon for an inlay designed for item-level tagging, while SAG, Tagstar System, and Tatwah Smartech are using TI's HF silicon in tags designed for tracking assets, such as library and livestock.

Atmel Launches LF RFID Microchip

Atmel Corp. announced the availability of the ATA5577, a 330-bit read-write, low-frequency transponder microchip. The device is designed for extended read-write distance and has been optimized for access control applications for hotel rooms, engineering departments, offices, time-recording systems, parking lots and customer loyalty and membership cards. The chip complies with ISO 11784 and ISO 11785 (FDX-B) standards, making it suitable for animal identification, waste management and other applications. This low-frequency device is insensitive to rugged environments and can be used under conditions that normally hinder the performance of higher frequency RFID devices, such as water, metal, dirt and so on. It measures approximately 1.1 square millimeter, allowing it to be used in almost any transponder package including glass transponders for animal identification. The ATA5577 transponder microchip supports different modulations and encodings, and is designed for passive identification systems with a 100 to 150 kHz magnetic field. It is backward compatible with Atmel's T5551, T5557 and ATA5567 LF devices. Samples are available now as wafers or die in wafer packs. Pricing for wafer shipments with quantities of 15,000 pieces starts at 34 cents each.

Fluensee Offering Asset-Tracking Startup Kit

Fluensee, a provider of asset-tracking systems that leverage RFID and other technologies, has announced the AssetTrack Express start-up package, designed to help companies get an RFID-based asset tracking project up and running quickly. The package includes Fluensee's asset tracking software, which can function as Gen 2 middleware and uses the EPCglobal application level events protocol for collecting and filtering tag data. It also comes with a Symbol Technologies MC9090 handheld RFID reader and up to 250 passive Gen 2 RFID tags in a variety of form factors. The tags are provided by label converter Metalcraft, and are designed to be readable when mounted on RF-unfriendly assets, such as those made of metal. It also includes a set-up guide and support services. For an additional cost, Fluensee notes, the kit can be customized through the addition of a fixed-position reader or more RFID tags. The kit is available now and costs \$10,000.

American RFID Solutions Upgrades RF Tool

American RFID Solutions, a provider of RFID tools and training, has updated its RFID testing instrument, the RF Shark Multi-Meter, which measures and evaluates read zone performance. The tool is designed to help an RFID system architect with installation and trouble-shooting an RFID read zone. The updated version of the tool, version 2.3, provides users a 3D graphic that plots the read zone coverage and can be used as a guide for making changes to a read zone. The system also includes a tool for optimizing the read zone for tags that may be attached to products made of materials that reflect or otherwise interfere with RF signals. The user can

employ this optimization tool to determine the best location on a product for tag placement. This feature can help users determine if a read zone failure is due to poor RF coverage or tag location on the SKU. The online tutor course costs \$149.00, and the RF Shark Multi-Meter Tool costs \$1,995.00. American RFID Solutions has also recently developed an online RFID education tool, RFID IQ Certification Tutor, designed to ready people for RFID certification tests provided by either the [International Supply Chain Education Alliance](#) (ISCEA) or [CompTIA](#). Users are assessed for their level of understanding of RFID topics, and training is customized to develop the students' knowledge. One hour of personal coaching, provided by an American RFID Solutions instructor, is also included.

IBM Upgrades Premises Server

IBM has announced a major upgrade to its WebSphere RFID Premises Server, a suite of software products designed to enable companies to easily access RFID and sensor data so they can pull it into such application software as an enterprise resource planning program or a billing system, to generate business logic. The upgrade, version 6.0, was designed to aggregate and analyze increasingly large quantities of data from RFID tags or other sensors, collected by various systems across the enterprise, including such remote locations as distribution centers or stores. With the new version, IBM is addressing end users' interest in leveraging the influx of RFID data they will generate when initiating item-level tagging applications. Companies that use device management software (or edgeware) made by other companies can pull RFID and sensor data into the Premises Server through integration software IBM is developing with those edgeware providers. These include [OATSystems](#), which is already supporting this integration software. RFID hardware manufacturers [Alien](#) and [Reva Systems](#) have also announced support for the Websphere upgrade. According to IBM, a number of its customers are already utilizing Premises Server 6.0, including health-care distribution company [AmerisourceBergen](#), which is using it as part of an electronic pedigree system and to improve its receiving and shipping operations. The upgraded software is available now, though pricing has not yet been announced.

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