

RFID News Roundup

ThingMagic says new OS boosts reader performance; forklift attachment integrates RFID; TI unveils new HF reader chipset; Avery, Vue Technology joining forces for retailers; Fluensee, Intellex combine offerings; Spartan stores accepting RFID payments; Manakoa to leverage newly acquired wireless license; Atmel and SkyeTek partnering.

Jan. 12, 2007—The following are news announcements made during the week of Jan. 8.

ThingMagic Says New OS Boosts Reader Performance

Cambridge, Mass., RFID reader developer ThingMagic has released an upgraded operating system for its Mercury 4 and Mercury 5 interrogators. The new OS, dubbed Yagi, is version 2.4 of the software. The company claims a new algorithm allows Yagi to provide performance improvements when operating in areas full of RF interference from other readers, wireless networks and other sources of RF, such as cordless phones. Written by ThingMagic cofounder Yael Maguire, the algorithm enables a reader to estimate the number of tags within its interrogation field at any given time so that it can read more of them more efficiently, according to Kevin Ashton, the company's vice president of marketing. Yagi enables the Mercury interrogator to read more tags more accurately and quickly overall, he says, including weak or poorly performing tags. The company has observed that Mercury readers running the Yagi OS can achieve read rates of up to 200 unique tags per second, even when the tagged objects are in motion. Previous versions of the software, says Ashton, read up to approximately 100 tags per second. Mercury5 and Mercury4 read all EPC Gen 2 and Gen 1 tags, as well as ISO 18000-6B and UCode 1.19 tags. However, the new algorithm applies only to the EPC Gen 2 (ISO 18000-6C) protocol. The software upgrade is available now through several ThingMagic resellers, including AbeTech, Acsis, BuyRFID, Conectag, Creek Systems, Fujitsu, IconNicholson, M/A-COM, Markem, NCR, Quest Solutions, Retek Solutions, RFID Global Solutions, Rush Tracking, VeriSign and Venture Research. The fee to install Yagi as an upgrade to existing interrogators depends on the reseller; many service contracts include free upgrades. The manufacturer's suggested retail price is \$1,995 for the Mercury5, \$995 for the Mercury 4, with volume discounts available.

Forklift Attachment Integrates RFID

RFID hardware manufacturer Intermec has teamed up with Cascade, a Portland, Ore., manufacturer of material-handling equipment. Together, the partners will codevelop a means of retrofitting a forklift to be RFID-enabled by mounting an Intermec IV7 vehicle-mount RFID reader onto Cascade's load backrest (the area on a forklift attachment against which loads are carried). The companies say the backrest is adaptable because it can be used on most forklifts on the market today, and that they have also developed an antenna cell device, which houses the antennas linked by cable to the reader. The cells can be mounted at different places around the forklift to read tags in various placements—such as those attached to pallets or cases, embedded in warehouse floors and used for locating the forklift, or embedded in shelving and used to track product placement within a warehouse. The antenna cell and load backrest are each designed for use in compliance with the OSHA rules requiring a forklift driver to have a clear view of his surroundings at all times. The load backrest and antenna cell will be demonstrated at next week's National Retail Federation meeting in New York. The load backrest is available in North America, Europe, the Middle East, Africa and Latin America through Cascade distributors. The antenna cell and other RFID hardware developed for forklift applications, including the IV7 reader, are available now through Intermec and its dealers.

TI Unveils New HF Reader Chipset

Texas Instruments (TI) announced this week two new HF reader chipsets. The TRF7961 and the TRF7960 offer improved performance with a smaller footprint than the company's earlier chipsets. The TRF7961 supports the ISO 15693, Tag-It and ISO 18000-3 protocols. The TRF7960 also supports these, as well as the ISO 14443A/B standards. Key improvements, TI says, include regulators built into the device that reduce RF noise and improve overall performance. The TRF7961 also uses a single 13.56 MHz crystal, which is shared by the reader and microcontroller. Using a single crystal lowers cost, requires fewer components for the chipset and is more power-efficient, says Johnsy Varghese, product manager of the reader IC family. Both chipsets are available for purchase by RFID hardware manufacturers, to be incorporated into the interrogators they sell.

Avery, Vue Technology Joining Forces for Retailers

Avery Dennison Retail Information Services (RIS) and Vue Technology, a provider of solutions for item-level RFID product tracking, have created a marketing alliance to deliver cost-efficient item-level RFID solutions to apparel, footwear and consumer goods retailers. Under the agreement, Avery Dennison RIS will jointly market its line of item-level UHF Gen 2 RFID tags and labels, label printers and printing software with Vue Technology's RFID infrastructure, networking and software products, designed to maximize RFID interrogator power through shelving powered by multiple antennas. Together, the companies indicate they will equip retailers with item-level RFID solutions designed specifically to provide such benefits as reduced out-of-stocks, increased efficiencies and decreased labor costs and product shrink.

Fluensee, Intellex Combine Offerings

RFID-enabled asset management and supply chain solution provider Fluensee will now support Intellex's new battery-assisted passive tags and readers, as part of Fluensee's asset-tracking solutions. Under the terms of this agreement, Fluensee has become an authorized reseller of Intellex's InfoSure battery-assisted passive tags and I-Beam readers, which can read the InfoSure tags, as well as any UHF tag compliant with the EPC Gen 2 protocol (see Intellex Announces New Semi-Active, Passive Products). The InfoSure tags can be operated with or without the battery. When utilized in a fully passive mode, they comply with the EPC UHF Gen 2 standard. The InfoSure tags can be encoded and read from up to 100 meters away in free space when used with the I-Beam readers. Fluensee's asset-tracking platform consists of real-time location software and hardware provided by RFID, bar code, GPS and sensor technology providers.

Spartan Stores Accepting RFID Payments

Spartan Stores, a grocery company and distributor with 68 retail supermarkets and 19 discount food and drug stores in Michigan and Ohio, says it is equipping all of its stores to accept RFID-enabled payment (credit or debit) cards from MasterCard, Visa and American Express. Spartan owns and operates the Family Fare, D&W, Glen's, Pharm and Quick Stop store chains. The company says it has decided to begin accepting RFID payments. This will allow it to offer a more convenient shopping experience for its customers, who can pass their RFID-enabled cards or fobs in front of RFID payment terminals instead of swiping magnetic stripe cards or paying cash. Purchases under \$25 do not require a signature.

Manakoa to Leverage Newly Acquired Wireless License

Manakoa Services, a company developing high-security asset-tracking and authentication systems using RFID technology, has acquired Infinite Identification Technologies. Manakoa has obtained the firm from UTEK, a specialty finance company focused on technology transfer, through a stock transaction of an undisclosed sum. Infinite Identification Technologies owns the worldwide exclusive license for a reflective wireless technology for RFID and remote sensor applications, according to a joint statement from UTEK and Manakoa. The technology was developed for covert communication operations at the Los Alamos National Laboratory (LANL) for the U.S. Department of Defense (DOD), and is now declassified. Manakoa does not yet offer any commercial products utilizing the technology, but is developing them for security-related asset-tracking

applications in the petrochemical and agriculture markets, as well as for health care and national security.

Atmel and SkyeTek Partnering

Atmel, a San Jose, Calif., RFID inlay chip and reader provider, and SkyeTek, a Westminster, Colo., provider of embedded RFID reader technology, have announced a technology partnership. Atmel will use SkyeTek's Advanced Universal Reader Architecture to support its CryptoRF RFID inlay and reader products, which are compliant with ISO 14443. Atmel will work with a network of manufacturing partners to bring the products to market. These products can be used for RFID applications requiring highly secure data transactions. According to SkyeTek, Atmel could also incorporate the Advanced Universal Reader Architecture into its UHF products. In July, SkyeTek announced that its ReaderWare—part of the Advanced Universal Reader Architecture—supports a number of data-encryption methods, including the Advanced Encryption Standard (AES), the data encryption algorithm standard ratified by the National Security Agency (NSA), the Secure Hash Algorithm (SHA) and the Federal Information Processing Standards (FIPS) standard for an algorithm used to create a unique digital value that can be used to authenticate data (see SkyeTek Adding Security Support into Passive Platforms).

Copyright ©2005 RFID Journal, Inc. All Rights Reserved