

Mouse pad reader for item-level tags; SkyeTek simplifies interrogator modules; ready-to-ship smart labels for DOD suppliers; VDC study examines RFID for point-of-sale apps; VeriFone buying competitor Lipman; Xterprise offers reporting tool; SAVR releases modular reader systems; Mighty Card to deploy Yodobashi's RFID system.

Apr. 14, 2006—The following are news announcements made during the week of Apr. 10.

Mouse Pad Reader for Item-Level Tags

[Integral RFID](#), a Richland, Wash., RFID systems provider, is introducing a [new interrogator](#) that also serves as a mouse pad. This device is designed to enable users of the newly developed near-field UHF passive EPC Gen 2 tags to read items, such as pharmaceutical bottles, bearing the tag. Integral RFID chose a mouse pad form factor because it is a common object and could have multiple uses. Pharmacists can place bottles of tagged drugs onto the mouse pad to read the tags. The interrogator's antenna, located directly under the mouse pad cover, is tuned to read both near-field and far-field tags. Near-field tags have antennas designed for operation in the near-field, or magnetic field, within one wavelength, of an interrogator's antenna. Far-field tags are optimized so they can be read outside the near field. Near-field tags can be read up to 12 inches from the mouse pad, while far-field tags are readable up to three feet from it. Merchants interested in tagging goods at the item level could integrate the interrogator into their point-of-sale systems, so that the items for purchase would be identified through their RFID tags. The interrogator can read and write to passive UHF tags compliant with EPC Class 0+, as well as Class 1 Gen 1 and Gen 2 UHF tags. Integral says a development kit is available for those who want to write their own software interfaces to the reader. The interrogator will be available in May and costs \$1,195.

SkyeTek Simplifies Interrogator Modules

[SkyeTek](#) has introduced a new architecture for its readers that will enable customers to buy only the reader hardware required for their specific applications—cutting reader size and cost. The company's new ReaderDNA reference designs enable unneeded hardware items in SkyeTek readers, such as unwanted host interfaces and frequency settings, to be left out of final designs and readers. It also means SkyeTek's customers will not have to pay for unused equipment. The company says that a common hardware architecture across its HF and UHF reader modules means both lines will offer the same flexibility. SkyeTek licenses its reader hardware and software to companies looking to add RFID capabilities to existing products such as medical equipment. Enabling its OEM customers to select only the hardware components that specific applications require follows a similar move from SkyeTek last fall, when it launched its ReaderWare componentized software offering. The combined flexible hardware and software architecture—dubbed the Advanced Universal Reader Architecture (AURA)—is available across SkyeTek's HF and UHF offerings. SkyeTek estimates that by allowing its customers to buy only the hardware and software required for each application, its reader revenues will fall by between 50 to 75 percent per reader. However, the firm is confident that by offering readers that have been paired down to just their required components, it will help increase interrogator sales by spurring the development and deployment of many more applications involving embedded RFID readers. "Currently, readers are monolithic proprietary solutions," says Rob Balgley, CEO of SkyeTek, "and that

has held back the market. It's not unusual; the same happened with PCs, wireless and everything else. [Disaggregating reader hardware and software] will enable hundreds of unique applications."

Ready-to-Ship Smart Labels for DOD Suppliers

[Miles Technology](#), an RFID systems integrator and training provider based in Lake Zurich, Ill., is offering [U.S. Department of Defense](#) (DOD) suppliers a means of complying with the organization's RFID tagging mandates without deploying tagging operations of their own. Using an online ordering tool, suppliers can request any quantity of shipping labels, as long they can provide a CAGE code (the five-digit identifier the DOD provides with federal supply contracts), a starting serial number and the quantity of case and pallet labels required. Miles Technology then ships the smart labels—printed, encoded and verified—to the supplier, who then applies them to the cases and pallets it is sending to the DOD. The finished labels cost 70 cents each, and there is a \$25 shipping and processing fee for every order (rush orders cost more). Suppliers can also order an electronic file containing all of the serial number and corresponding hexadecimal tag data for each label. The companies could then enter this data into the Wide Area Workflow, the DOD's Internet-based system for electronic invoicing, receipt and acceptance of shipments, and sending advance shipping notices (ASNs). Suppliers who want to verify that the tags are still functioning prior to applying and shipping them to the DOD can also purchase an [AWID](#) interrogator able to read the [Alien Technology](#) UHF EPC Class 1 Gen 1 inlays embedded in the smart labels.

VDC Study Examines RFID for Point-of-Sale Apps

Retailers around the world spent nearly \$88 million on RFID systems for in-store applications in 2005, according to a report recently released by [Venture Development Corp.](#) (VDC), a research firm based in Natick, Mass. The report predicts growth of more than 35 percent annually in retailer spending on RFID for in-store point-of-sale (POS) applications through 2010, when the market is expected to reach nearly \$400 million. Based, in part, on telephone surveys VDC conducted with retailers during the first quarter of 2006, the survey showed that retailers are looking at RFID retail POS applications to provide improved inventory control (leading to cost reductions) and improved stock levels based on real-time customer activity and demand. Cost reductions should also improve margins, but deployment of RFID POS systems is dependent on proliferation of item-level tagging, which is currently cost-prohibitive, and on resolving other challenges. These include systems integration managing the volumes of data generated by RFID systems, synchronizing adoption across the supply chain and establishing agreement among retailers and manufacturers to determine tagging methods, placement and other issues. New POS systems will also require training costs and time, along with the costs of infrastructure upgrades to replace existing bar code-based systems with new ones capable of processing both bar codes and RFID. The report is part of VDC's 2005-2006 RFID Business Planning Service. For more information, visit [VDC's Business Planning Service portal](#).

VeriFone Buying Competitor Lipman

[VeriFone Holdings](#), a San Jose, Calif., provider of point-of-sale technology, including RFID-enabled payment terminals, will acquire [Lipman Electronic Engineering](#), an electronic-payment systems provider based in Rosh Haayin, Israel. Following the acquisition, VeriFone says, it will become the largest global

provider of electronic payment solutions and services, capitalizing on accelerating growth in the emerging markets and demand for IP-based and wireless payment systems. The acquisition is valued at \$793 million, based on VeriFone's share price at the close of trading on Apr. 7, 2006. Closing is expected to occur by the end of VeriFone's current fiscal year (Oct. 31, 2006). VeriFone expects the acquisition will enable it to grow its wireless payment technology.

Xterprise Offering Reporting Tool

Xterprise an RFID systems integrator and solutions provider based in Carrollton, Texas, has extended its solution offerings to include AnalytiX, a data analytics tool for suppliers shipping tagged goods to **Wal-Mart**. The tool's purpose is to help suppliers gain visibility into the movements of their goods once Wal-Mart has received them, and to gain insights into how they might work with the retailer toward improving product promotions and keeping store shelves stocked. Xterprise president Dean Frew says the tool was designed using the operational expertise the company has gained through numerous RFID system deployment and integration projects for Wal-Mart suppliers. Using **Microsoft's** SQL Server 2005 platform and its own data extraction and analysis tools, AnalytiX pulls RFID read event data from Wal-Mart's supply chain feedback tool, Retail Link, then generates reports for the supplier. If the supplier is using **SAP's** enterprise resource platform, Xterprise can feed the reports directly into that ERP application through an interface it has developed. The reports show metrics, such as how quickly tagged cases, promotional displays and other tagged items were brought to the sales floor after arriving at Wal-Mart locations. They also show what percentage of suppliers' tagged goods Wal-Mart has successfully read. In addition, Xterprise can develop customized reports based on end users' needs. Suppliers that have RFID tagging systems in place can purchase AnalytiX through a software license, or as a non-licensed service. Suppliers who have not yet initiated a tagging system can purchase the software as part of a turnkey package. AnalytiX is now available; pricing has not been disclosed but varies depending on the customer's needs. Xterprise is currently developing interfaces to pull read event data from other retailers' feedback systems, and is developing interfaces for enterprise systems from providers other than SAP.

SAVR Releases Modular Reader System

SAVR Communications has developed a modular RFID interrogator platform called Connect & Communicate. Three separate modules are used to create each interrogator: an RF module, available as either HF or UHF; a communication module supporting either RS232 cables, Ethernet or a Wi-Fi link to send tag data to back-end systems; and a microcontroller module, which houses SAVR software that runs the RF and communication modules and also includes input/output ports for industrial equipment such as programmable logic controllers, robotics, conveyors and control systems. All three modules latch together to form a stack. The HF module reads ISO 15693, Philips I-code and Mifare tags, comes with one internal antenna and can support one external antenna. The UHF module reads UHF EPC Class 1 Gen 2 tags only, and supports up to four external antennas. The SAVR software that runs on the microcontroller can perform some basic tag data filtering and aggregation. The software also uses a proprietary technology that SAVR calls Superimposed Modulation Technique (SMT), which embeds multiple data streams onto a single carrier signal using frequency, amplitude and phase modulation techniques. According to the company, the resultant waveform accommodates up to one real-time

analog signal and three digital data streams concurrently, enabling multiple Connect & Communicate interrogators. The readers can then be daisy-chained to communicate with each other through the microcontroller module, in order to receive RFID tag data while simultaneously controlling a mechanical device and sending information to a central processing or data collection network. The interrogators can use this technology to monitor the interrogation zones being generated by other readers in the network. That way, readers in the stack do not interfere with each other or leave dead zones, where signals are not reaching. The embedded software recognizes and configures new modules as they are added, and also uses internal and external gaskets to seal out dust and moisture for a NEMA-4 rating.

Mighty Card to Deploy Yodobashi's RFID System

Yodobashi, Japan's second-largest consumer electronics retailer, has named [Mighty Card Corp.](#), part of the [Marubeni Group](#), as systems integrator for its RFID rollout. In September 2005, Yodobashi announced it would receive tagged shipments starting in May 2006. So far, approximately 30 suppliers have already agreed to tag their cases and pallets. According to Mighty Card, it will deploy around 100 [Symbol Technologies](#) UHF Gen 2 readers operating at 952 to 954 MHz, the frequency band assigned to UHF RFID systems in Japan. The readers will be deployed in Yodobashi's distribution center in Kawasaki, Japan.