

ViVOTech announces new RFID payment applications; NXP chip supports Advanced Encryption Standard; Ekahau upgrades location engine; TI makes fobs and wristbands for PayPass; SAP certifies SupplyScape's e-pedigree app; Atmel, Melexis partner on payments, ID apps; Mercury4 gets green light in So. Korea; collaborative RFID approach can hasten ROI, says Aberdeen.

Nov. 10, 2006—The following are news announcements made during the week of Nov. 6.

ViVOTech Announces New RFID Payment Applications

[ViVOTech](#), an RFID payments specialist, made three product announcements this week. The company says it is working with [Compris Technologies](#), a subsidiary of [NCR Corp.](#) and a provider of software solutions for restaurants, to launch RFID-enabled payment solutions for drive-through, diner's table and front-counter applications. The solutions will combine ViVOTech's RFID-enabled payment terminals with point-of-sale (POS) software from Compris. ViVOTech developed a special ViVOPay DTm terminal for drive-thru payments, designed to speed up drive-thru lane transactions by accepting either RFID-enabled (contactless) or magnetic-strip card payments. Another recent offering, ViVOPay Dine, is a portable payment terminal that accepts both RFID and magnetic-strip payments, as well. ViVOTech also debuted its first payment terminal able to process both RFID transactions and smart-card payment cards requiring EMV authentication. The terminal, dubbed the ViVOPay 4500 EMV, will be marketed in Europe, the Middle East, Asia, Canada and Latin America, where EMV-compliant payment systems are used. The 4500 EMV is built on the same platform as the ViVOPay 4000 RFID (contactless) terminal, used widely in U.S. retailers that accept RFID-enabled payments from [MasterCard](#), [Visa](#) and [American Express](#). Thirdly, ViVOTech has released an application platform for provisioning cell phones containing near-field communications (NFC) technology so consumers can use the phones to make RFID-enabled payments. The ViVOnfc Suite 2.0 platform consists of a server that resides at the payment account's issuing bank, another server located at the mobile operator's premises and ViVOWallet, an application that runs on the mobile phone. ViVOWallet enables payment applications, utilizing an interface for provisioning account information to the phone's secure memory.

NXP Chip Supports Advanced Encryption Standard

[NXP Semiconductors](#) (spun off this summer from Philips Semiconductor) has announced a new RFID integrated circuit, the Mifare DESFire8—the first RFID tag chip to support the 128-bit encryption scheme of the Advanced Encryption Standard (AES). The Mifare DESFire8 chip also supports DES and 3DES encryption schemes used by earlier Mifare chips. Designed primarily for transport schemes, citizen cards and ID applications, Mifare DESFire8 provides an increased memory size of up to 8 kilobytes and a flexible file structure, allowing up to 28 applications to be implemented on one single card carrying the chip. For instance, a single smart card with the chip could be used for public transport, event ticketing, secure payment and building access. Last week, NXP announced it had cut the thickness of its SmartMX family of integrated circuits, used in electronic passports (e-passports) by 80 percent of the deploying countries, the company reports. The chips, it adds, can now be manufactured to be only 75 micrometers (0.000075 m) thick—50 percent thinner than the current industry standard for smart-card ICs. According to NXP, using the thinner chips will enable agencies issuing e-passports to

increase the thickness of materials designed to protect the RFID inlay, or for the addition of additional security features, such as laser engraving.

Ekahau Upgrades Location Engine

Finnish real-time location systems provider [Ekahau](#) says it has upgraded its software used for locating and tracking its tags. The upgraded software, Ekahau Positioning Engine (EPE) 4.0, features faster and more accurate location-tracking capabilities than its predecessor, the company says. The improved accuracy is enabled by a new set of probabilistic algorithms that, according to Ekahau, improves accuracy in locating tagged items by 25 percent over the previous version of the software (EPE 3.1). Ekahau says it can now locate a tag to within 1 meter. The upgraded software can also track more than 10,000 tagged objects and process up to 600 location transactions per second. This is a three-fold improvement over EPE 3.1, which could track a maximum of 200 transactions per second and a maximum of 3,000 tags per server, in total. In addition, Ekahau is now offering an HTTP-XML application-programming interface (API) with EPE 4.0 that speeds for application development and integration of the Ekahau system with third-party systems. EPE 4.0 includes a new web-based administrator interface and a new deployment tool, the Ekahau Location Survey, which can be used to survey a site that will be monitored for tags. End users can utilize the survey tool to design and map their Ekahau deployment. The Ekahau tags transmit at 2.45 GHz and can be read by any 802.11-complaint access points. Customers can utilize the software's integrated tag-management tool to monitor battery level, control the LED and buzzers on the tags, and reconfigure and update firmware over the air. Ekahau's chief technology officer, Lare Lekman, says the company used customer feedback to upgrade its positioning engine. Ekahau's technology partners, including middleware provider [Sybase iAnywhere](#), are integrating EPE 4.0 into their middleware platforms. EPE 4.0 will be generally available in December 2006. Free evaluation software is available now for download [here](#).

TI Makes Fobs and Wristbands for PayPass

[Texas Instruments RFID](#) announced the release this week of two new form factors for tags using its ISO 14443-compliant RFID inlay: a key fob and wristband. TI is enabling the inlays for use as [MasterCard PayPass](#) devices, which use RFID technology to communicate the owner's payment information to payment terminals. To date, most such payment cards—MasterCard PayPass, as well as similar formats from Visa and American Express—have been in the traditional credit-card form factor. However, banks are starting to look at alternative form factors for issuing the devices for payment and ticketing applications. Wristbands, for example, could be used issued to event patrons. TI is working with [Oberthur Card Systems](#), which already supplies banks with the PayPass payment cards, to convert the compact inlays into finished project. The fob inlay measures 20 mm by 25 mm, while the oval-shaped wristband inlay is 41 mm by 20 mm.

SAP Certifies SupplyScape's E-Pedigree App

[SupplyScape](#), a provider of electronic-pedigree software for the pharmaceutical industry, says that enterprise-software provider SAP has certified SupplyScape's E-Pedigree application as "Powered by NetWeaver." This means pharmaceutical companies using the mySAP enterprise-resource planning (ERP) and Auto-ID Infrastructure (All) software platforms can be confident in their ability to integrate the

SupplyScape E-Pedigree application into those platforms. By integrating the SupplyScape E-Pedigree solution with SAP's All, companies deploying RFID or other serialization technology can combine serialized product information with enterprise business processes. The FDA has identified RFID as an effective tool for authenticating drug products to deter counterfeit drugs into the pharmaceutical supply chain. SupplyScape's E-Pedigree application can process serialized data from RFID tags or other authenticators, such as serialized bar codes.

Atmel, Melexis Partner on Payments, ID Apps

Chipmaker [Atmel](#) and transceiver manufacturer [Melexis Microelectronic Integrated Systems](#) report that they are working together on a new endeavor. The two companies are proposing innovative solutions based on high-frequency (13.56 MHz) RFID interrogators and devices compliant with the near-field communication (NFC) specification for RFID-enabled electronic payments and data-exchange devices. The partners plan to market these solutions for such applications as verifying electronic passports and other identity documents, RFID-enabled payments and peer-to-peer information exchange between NFC devices. This week, the two firms demonstrated a passport designed for reading electronic passports at the [Cartes 2006 conference](#) in Paris. They also demonstrated an NFC application. The demos featured Atmel's AT90USB AVR microcontroller and the Melexis MLX90131 RFID transceiver.

Mercury4 Gets Green Light in So. Korea

RFID hardware company [ThingMagic](#) says South Korea's [Ministry of Information and Communications](#) (MIC) has certified that the ThingMagic Mercury4 RFID reader meets the country's regulatory requirements for operation of RFID goods and can be sold in that country. The interrogator complies with [EPCglobal's](#) Gen 2 standard. ThingMagic will sell the device through a network of resellers in South Korea, such as [CIT](#), [M/A-COM](#) (part of [Tyco Electronics](#)), [Sontec](#), and [Ubi-Tech](#). ThingMagic says it wanted to ensure that its Mercury4 interrogator was certified for use in South Korea because of the country's burgeoning RFID market and many end users, including Korean airlines and high-security government offices and casinos.

Collaborative RFID Approach Can Hasten ROI, Says Aberdeen

Firms that spread the design and implementation of RFID systems between their business line management and information technology enjoy a 26 percent shorter time to positive ROI, on average, than those taking a less collaborative approach, says a new report from the [Aberdeen Group](#), a market research firm. Aberdeen's report says firms that build in-house RFID expertise realize a return in 35 percent less time than those that out-source the management of the entire project. Aberdeen conducted research for the 30-page report, entitled "ROI in RFID, a Benchmark Report," by surveying business line managers, IT executives and corporate-application developers. The company questioned these professionals about their current plans for RFID, the degree to which a return on investment impacted their companies' decisions on RFID, the benefits they have realized from the technology and what tools they used to measure ROI. This study found that, on average, more than half of the early RFID adopters—those that have been using the technology for more than five years—now earn greater than \$5 billion in annual revenue and have invested an average of \$1.5 million in the technology, which is about three times the average. Of these companies, 85 percent achieved an ROI within the first five

years of deployment. Examining all the companies that have successfully deployed the technology, it said, took at least 18 months to realize an ROI—about four years at the most—the average being 30 months. Underwritten by chipmaker [Intellex](#), RFID solutions provider [ADT](#) and asset-tracking solution vendor [TrenStar](#), the report is available on the [Aberdeen Web site](#) until the end of the year. After that, the cost of the document will be \$399.