RFID NEWS
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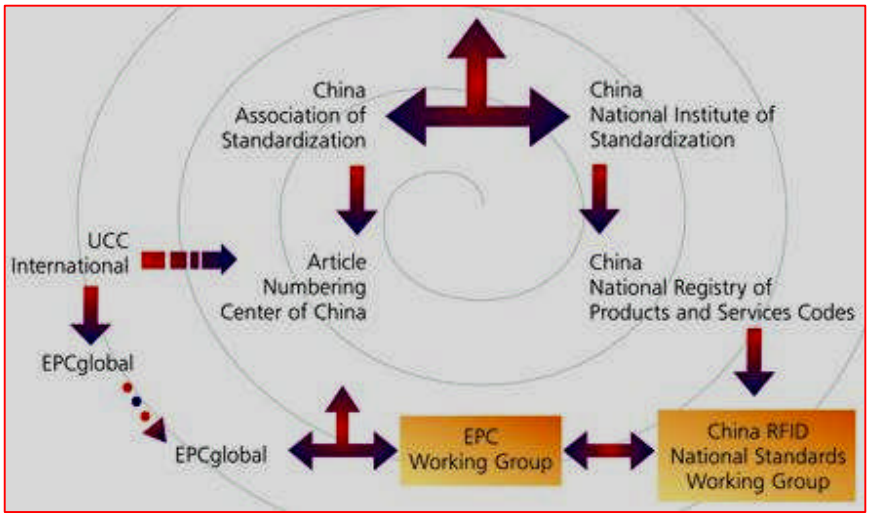
ET TRENDS

MARKET & BUSINESS NEWS

RFID Gaining Momentum in India - The adoption of the RFID is at inflection point in India in retail, railways, airline and healthcare and pharma sectors. While the cost of RFID tags is still high for mass adoption, it has come down significantly in the last two years. This will get cheaper as it makes further inroads, according to the Indian School of Business. There are major programs with railways to see how they can better manage car movement, work continues in the healthcare sector, and major Indian drug-maker, Ranbaxy has deployed RFID for its products sold overseas and many manufacturing companies are doing so internally to bring about supply chain efficiencies. In addition, Heritage is actively evaluating RFID usage in their stores, there are about 10 companies in India offering these solutions to MNCs, and it won't be long before others follow suit. The airline industry and its notorious lost baggage was a major cause for concern that will be addressed by RFID. Source: Moreover Technologies.



RFID News from China - China has historically been reluctant to work to "foreign" standards and the government does not want Chinese manufacturers to pay license fees to foreign companies based upon a foreign technology standard. Up until this year, this narrow viewpoint has stalled adoption of an RFID standard in China and thus put a limit on the ultimate growth of the RFID supply-chain initiative. Now, China is willing to work to ISO standards. In 2006, the ISO issued an update to standard 18000-6 to define the bandwidth and communication protocol of EPC Gen 2 Class 1 UHF tags throughout the world. It essentially incorporates the earlier EPC standard. China's State Radio Regulation Committee (SRRC) recently issuing a ruling to approve bandwidth in the 840.25 to 844.75 MHz and 920.25 to 924.75 MHz ranges for use by UHF RFID tags and readers in that country. These two bands allow the use of North American tags as

well as European tags within China. The higher band overlaps the North American Standard, whereas the lower band is close enough to the European standard to allow tags to be read. China continues to work on its own version of an RFID communication standard, however. But the three standards that are now in place (EPC Gen 2 Class 1, ISO18000-6, and the Chinese bandwidth standing) effectively open the Chinese market to the technical leaders in supply-chain RFID. The Chinese have been working on their own RFID spec for years, but have finally accepted world standards, maybe to be ready for the Olympics. In early August, China's Ministry of Information Industries (MII) announced the creation of RFID pilot programs in several regions, notably including the six Olympic host cities of Beijing, Shanghai, Tianjin, Shenzhen, Dalian, Chengdu and Nanjing. The areas chosen will be used to pilot RFID use in agriculture, public security, manufacturing management, supply-chain management and "modern service industry."

Chinese and foreign organizations involved in the massive logistics effort for the Olympics now have the technological leverage needed to use off-the-shelf UHF RFID hardware to manage their supply chain. The Chinese spectrum standard kicked off efforts by existing manufacturers to get certified to the new standard. In late August, Intermec announced that it was the first to achieve China State Radio Regulation Committee certification for their hardware --specifically their truck-mounted, fixed, and handheld readers for EPC Gen 2 tags. We can expect other manufacturers to quickly follow suit. The total size of the Chinese RFID market in 2007 will be $1.9 billion. A large hunk, $1.65-billion, is for one program: electronic national ID cards. The remainder includes all other RFID uses, including UHF supply-chain RFID. The UHF market is obviously undersized given the position of China in the consumer supply chain worldwide. The technology announcements and Olympics announcement lay the groundwork for significant new work in UHF RFID logistics within that country.

Three RFID Technical Specifications: The International Telecommunications Union (ITU) governs how the radio spectrum is divided up according to use in the different areas of the world. The ITU defines the frequencies in the UHF spectrum that are available for RFID tags, but it doesn't specify how any given country should implement an RFID technology standard. That task is left to national and international standards bodies. The UHF spectrum that is available for RFID ranges from 860-MHz to 960-MHz, but it is not a continuous allocation. In Europe, for example, the EU regulations restrict UHF RFID tags to 865 - 868-MHz. North America uses the 902 to 928 MHz portion of the spectrum. Since RFID is a new technology, initial efforts to standardize the tag communications protocols originated in the U.S. at the MIT Auto-ID center (which formed the basis of what we now call EPC Global). Source: IW

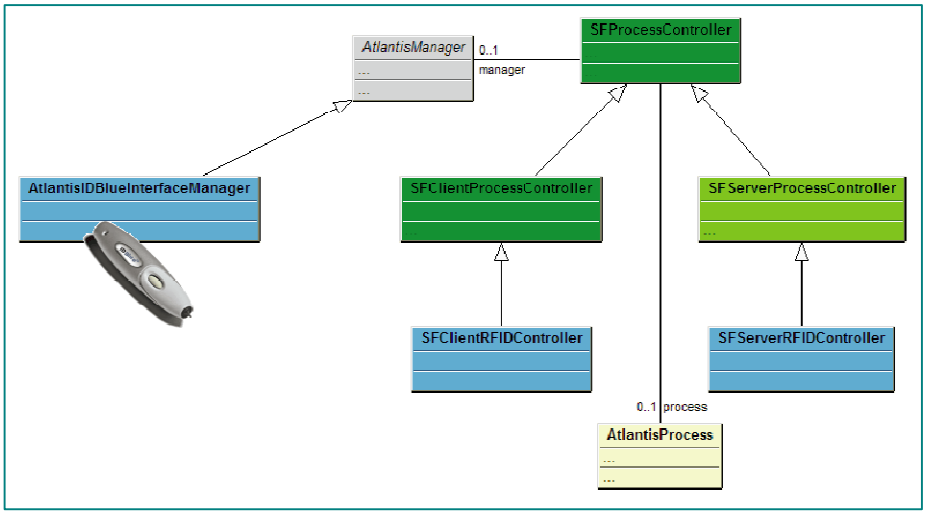
ICs for Smart Cards & Tags - Infineon claims the #1 position in the market for chip card ICs/RFID chips for the tenth consecutive year per a Frost & Sullivan Study. They also will be the sole chip supplier for the largest U.S. patient healthcare project yet. Infineon was selected to supply the chips for a patient healthcare card in the USA. The joint project of

Mount Sinai Medical Center and the Elmhurst Hospital Center, both in New York, and Siemens Medical Solutions has been set up to improve administrative efficiency by means of smart card technology. The alliance plans to deploy up to 1.2 million Patient Health Smart Cards with a high-security controller chip on them within the next two years. Within the project, 45 medical institutions in the New York urban agglomeration will be networked. Presently, the project is in test mode with the tests scheduled to be concluded by the end of the year. Infineon in 2006 had a share of 29.1% of the $1.9-billion global market for card/tag chips. Samsung held the second place with 15.5% followed by NXP with 14.3%, Atmel had 13.0% and Renesas held 12.5%. Infineon also claimed to be the largest vendor in the security microcontroller segment with a market share of 27.6%. The market for contactless cards is expected to grow by an average of 34% annually over the next couple of years. Another major growth field is mobile communication with high-end SIM cards as one of the enablers for mobile television and near field communication (NFC). These applications are driven by integrated memory spaces in the multi-megabyte range. Source: EETimes.

TECHNOLOGY & PRODUCTS

RFID Readers with Bluetooth - Cathexis (Canada), a RFID systems and services company in St. John's, Newfoundland, said its pen-sized IDBlue product will be displayed at next week's GITEX Technology Week show in Dubai. The company claims it is launching the world's first Bluetooth-enabled mobile RFID reader. IDBlue works with platforms from several industry-leading vendors. It uses integrated Bluetooth technology for use with wireless handheld devices. It can be used as a stylus and has enough data storage capacity to read thousands of RFID tags without linking to a computer. IDBlue is said to eliminate the need for bulky devices, allows users to fit the reader into their pocket, and works well in highly mobile operations. The IDBlue framework integrates with Microsoft BizTalk RFID, part of the upcoming Microsoft BizTalk Server 2006 R2 release. It automates and manages business processes for fast results. Cathexis said that BizTalk RFID allows plug and play device management to make other RFID-based technologies more efficient. IDBlue is designed for applications that identify and track specific items that typically require human interaction, such as those used in the health-care, pharmaceutical, maintenance, and event management industries. WaveMark and Halspan are testing and using the product. WaveMark provides information systems that allow hospitals, surgical centers, and manufacturers to control and manage the flow of high-value, consumable medical devices. The company uses RFID technology to collect and report information in a hands-free manner. Halspan Ltd is an U.K. provider of timber-based fire door products. The company has partnered with Cathexis to develop a modular system for traceability, chain of custody, accountability and inspection of fire doors. RFID technology can help ensure that each door is securely, permanently, and uniquely identified. Source: InformationWeek

More on New RFID - Bluetooth-enabled smart phones, PDAs, handheld computers, and notebooks now can easily read active RFID tags and run related applications. RF Code announced a new mobile active reader with a Bluetooth interface for use with any other Bluetooth device. The company also released a sample asset tracking application for the reader that can run on BlackBerry, Windows Mobile, and Windows XP devices. The mobile Bluetooth reader is now being used to perform asset audits inside their buildings in several beta programs. The M220 works with RF Code's family of 433 MHz active RFID tags and has a range of approximately 70 meters. It weighs 5.2 ounces and measures 4.37 by 3.01 by 0.99 inches. A belt clip and shoulder strap are available, and the reader can also be mounted to a desk, cart, or vehicle. It can be used indoors or out. The device can interface with computers through Bluetooth or a USB cable. It can also be used without a computer to store up to 4,000 tag reads. List price is $995. Source: RFID Update.



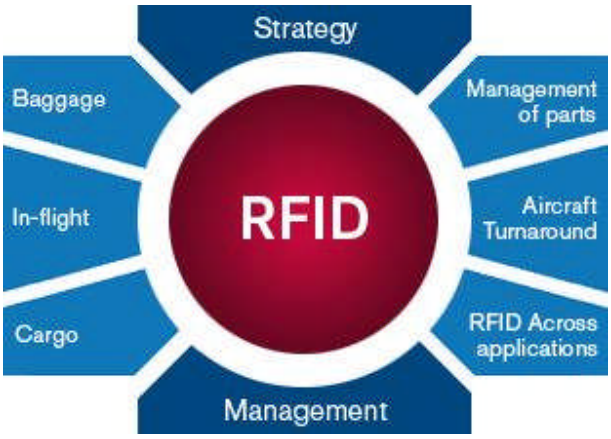
BizTalk with RFID - Microsoft has launched its BizTalk Server 2006 R2 with a heavy focus on embracing RFID technology. The server software, which embraces service-orientated architecture and business process management, now includes RFID interoperability code to help companies use the tagging technology. Included in Microsoft's RFID-friendly tech is an abstraction layer to separate a company's application from the associated hardware and a rules layer to dig out the important bits of information.

APPLICATIONS

Ultra-thin Chip for Documents - Texas Instruments announced a new paper-thin, wireless chip that could eventually be used in U.S. passports and other identification documents. The new RFID chips were designed by TI to be much quicker to produce and have more memory than existing chips. That extra memory could be used for security systems such as a digital scan of the document holder's fingerprint. Although the U.S. government has already started issuing passports with RFID chips from other manufacturers, TI vice president hopes to win a second round of contracts likely to come up in 2008. TI is also looking at selling the technology to other countries. Source: Dallas Morning News.

Ski Tags - Vail and Breckenridge lift ticket could include some RFID technology this year. Vail Resorts will use SkyeTek RFID to read some of its lift passes at Vail Mountain, Beaver Creek, Breckenridge, Keystone and Heavenly ski resorts to improve efficiency and enhance guest services, the companies announced Monday. The technology will automate lift ticket authentication this season. SkyeTek will allow Vail to integrate RFID and Web services with the resort's existing applications. SkyeTek is leveraging its Web services technology and modern RFID security model to transform the on-mountain experience into something faster and more secure than in the past. SkyeTek combines RFID software and hardware, a security application, a distributed policy management engine, and network-ready readers. SkyeTeks touts its ability to deliver a seamless RFID edge network capable of centralized management and real-time response for applications in item tracking, product authentication, access control, and patron management. Source: EETimes.

RFID and Aviation - The aviation industry has long been considered a prime candidate for RFID adoption. According to Motorola, aviation is one of our targeted verticals, and we are seeing a tremendous amount of inquiries. Seen as a possible panacea to the lost luggage problem that costs the airline industry hundreds of millions of dollars per year, baggage tracking is one of the leading applications of RFID in the sector. High profile deployments include those at the busy international airports of Hong Kong and Las Vegas (Motorola was involved with both). In 2005, the International Air Transport Association (IATA) published a global specification to define exactly what information should be included on a bag's RFID tag, referred to as the luggage "license plate". While such developments speak to rapid progress over the last few years, worldwide RFID-enabled baggage tracking is still in the early stages of deployment. "The nirvana comes when RFID is broadly implemented across multiple airports and airlines," according to Motorola.



Baggage tracking is far from the whole story, he noted, as there are numerous other applications of RFID within aviation that the industry is embracing enthusiastically. There is strong demand for cargo tracking, tracking of assets on the tarmac, and trolley tracking. Cargo tracking enables the visibility of goods and freight that are shipped by air. In addition to enhanced supply chain efficiency, cargo tracking also offers security benefits, allowing the industry to readily identify shipments whose integrity may have been compromised. Tracking tarmac assets, such as the trailers that cart luggage from the

airport to the loading hull of the plane, expands visibility of tagged luggage beyond the airport. Tracking trolleys is another area. The heavy metal carts that flight attendants use to distribute food, duty free goods, etc. and the goal is to improve asset visibility and inventory management. Airlines' current lack of information about the location of all trolleys at any moment requires them to carry a surplus of the costly items. Leveraging RFID for real-time trolley visibility and “locationing” will enable airlines to avoid this excess, thereby improving operational efficiency and reducing cost.

In addition to RFID adoption at the airports themselves, the technology is also gaining traction in the supply chains of the world's two largest aircraft manufacturers, Boeing and Airbus. US-based Boeing has been an active RFID evangelist for a few years, whereas France's Airbus more recently made a splash with plans to initiate an aggressive stage of RFID deployment across its supply chain (see Airbus Taps ODIN, Signals Aerospace RFID Adoption). A final sweet spot for RFID in the aviation industry is in the area of maintenance, repair, and overhaul, or MRO. Managing MRO is a multifaceted, challenging affair for aviation companies, laced with issues of security, safety, inefficiency, and compliance. A typical repair or maintenance job is composed of many sub-processes, including identifying the problem, locating or purchasing the required part, locating the appropriate personnel to execute the repair or replacement, and documenting almost every step. RFID can streamline and facilitate the MRO process, and help aviation companies realize so-called "integrated MRO", which is essentially technology-enabled visibility into the entire MRO process, both within a company's four walls and out into its suppliers' inventories. "The vision is that airplane parts are tagged, and their maintenance history is kept directly on the RFID tags themselves," commented Shukla. "This will result in faster servicing times and improved safety overall." Still other applications of RFID are predicted for the years ahead, such as improving visibility of airport personnel, travelers, and removable airplane inventory like life vests. All told, the RFID opportunity in aviation is large indeed. The IATA predicts that when the technology is fully implemented for baggage tracking alone, the savings generated for the industry will be more than $700-million annually. Source: RFID Update.

Wireless ID for Healthcare - Smart Cards, RFID, biometrics and hand-held devices are being adopted by hospitals according to Frost & Sullivan, who focused on India for the study. With the Healthcare Delivery space in India continuing on its aggressive growth path; offering state of the art disease management modalities in established centers, providing world-class quality care to the inaccessible geographies of the country, and optimizing the cost of healthcare expenditure have become the prime focus areas for all players in the healthcare delivery space. These focus

areas have channeled efforts into leveraging innovative technologies and creating a sustainable competitive advantage for the participants and have consequently brought the role of Information Technology to the fore. The impact of Information Technology in Healthcare Delivery has been significant not only on the process and enterprise efficiency needed to bring healthcare services closer to people but also in aiding and improving the disease management modalities given the convergence of medicine, devices and technology. This is clearly reflected in the fact that the growth of IT in healthcare sector is expected to record a CAGR) of 18% (2006-2010).

Tier I hospitals are spending approximately 2% of their revenues on IT (new purchase plus maintenance and upgrade). Apart from these, hospitals are also going ahead with the use of some advanced technologies like smart cards, RFID, biometrics and hand-held devices to further improve processes. The major challenge every hospital faces during IT adoption is in the areas of implementation and maintenance services. Therefore, in Indian healthcare delivery market, areas like training, infrastructure, implementation support and maintenance services to healthcare providers seem to be the biggest upcoming opportunities. Various major IT players - Microsoft, HP and InterSystems, partnering the event also addressed the issues focusing on connected healthcare services and technologies that will help reduce healthcare costs and create an environment of easy accessibility to healthcare delivery in both public and private sector services. The other key partners for this event included AGFA Healthcare and Sobha Renaissance. Modern Medicare, Express Healthcare, Medical Buyer and e-Health were the official media partners for this event. Source: Business Wire India.

The Guard uses RFID - WebTech Wireless, a provider of location-based and fleet telematics services, provided the Texas National Guard with its wireless Quadrant system as part of an evacuation-communication system designed to keep track of evacuated residents during natural disasters. The National Guard allocated RFID, tags to keep track of people, pets and medical supplies in the event of evacuation and equipped buses with evacuation-communication kits in portable cases that included the company's WT5000 locator, a laptop, an external vehicle battery, Symbol Technology's RFID reader and a cellular phone. The company said each person, pet or medical supply kit assigned with an RFID tag has their information entered into a central database as they board evacuation buses. The locator then transmits the exact location of each bus every minute, enabling the Quadrant system to update the database to keep track of evacuees. Source: MRT