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Smart Card News

Smart Cards, SIM, Biometrics, NFC and RFID

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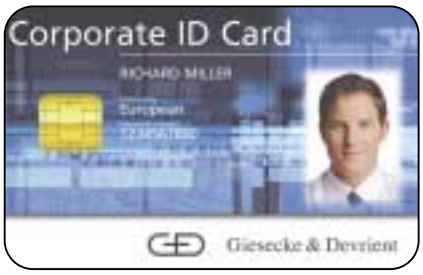

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Dear Subscribers,

As reported this month, scientists are now able to transplant a face, so where does this leave facial biometrics'? If a biometric is transferable then you might as well stick to a PIN. We have reported "gummy bears" upsetting fingerprint biometrics, as demonstrated by Professor Matsumoto from Yokohama University and fake iris scans, but apparently, and its bad news for the criminal, transplanting a face does not change the actual bone structure. So a biometric based on the bone structure of a face should still be feasible.

The main problem with using a facial biometric on an ID card or passport is, of course, the amount of memory required to store the data, if you store the base image, that needs around 16K of non-volatile memory, this adds significantly to the cost, but if this is a more reliable biometric then this should off set the cost and increase public acceptance of this non invasive technology.

I have been in Edinburgh for the last couple of weeks and was able to report that it is the first UK city to implement a mobile phone parking scheme. I have not been able to find a parking meter to try it out but have been reliably informed that the system works really well and can even warn you 10 minutes before your parking time expires. Judging by the number of traffic wardens wandering around Edinburgh, this is a really good idea.

While on the subject of Edinburgh and biometrics, the govenements latest "charm offensive" visited Scotland in mid September . The Home Office Biometric Roadshow has been to the city of Edinburgh to showcase the use of face-recognition technology and the possibility of iris-scanning and fingerprinting. The ultimate aim of this roadshow is to try to sell the concept of ID cards to the British public. Our lead story explains more about this roadshow and the problems the ID card is currently facing!

Patsy

Big Brother Is Already Here

"We already have a Big Brother society." These are the bold words of UK Home Secretary Charles Clarke as he breathed new life into his bid to introduce national identity cards into the United Kingdom. He said "ID cards are a means of controlling the Big Brother society rather than creating it. Big Brother society is already here and my job is to control it." These words were spoken to the Eastern Daily Press (EDP) in a statement were Mr Clarke, by his own admission is a "militant supporter" of ID cards, argued the belief that cards would infringe civil liberties. He believes these views were "ridiculous". He continued to attacked the "Big Brother state" accusation head-on, insisting: "People's names are already on a large number of databases" and "most of us already have dozens of cards in our wallets with our identities on".

The Bill to introduce ID cards has already gone through its Second Reading in the House of Commons with a majority of just 31 on June 28, with MPs in all parties anxious about civil liberties and the cost. Opponents are lining up to try to defeat the Government in the Bill's later stages, and promising fierce opposition in the House of Lords if it does clear the Commons. A report from the London School of Economics (LSE) said the ID-card scheme could cost as much as £19bn, or about £200 per person - a claim dismissed by Mr Clarke as "complete nonsense". "We have to remake the argument for ID cards. It needs to be re-articulated. The argument against is principally cost. I'm less preoccupied about the civil liberties issue." said Mr Clarke

Phil Booth, NO2ID's National Coordinator said: "Mr Clarke's arguments don't stand up, and he is now trying to confuse the British public with doublespeak. But this is an important admission. His stated intent to 'control Big Brother society' shows the Government's real agenda: to monitor law-abiding citizens throughout their entire lives. The Government just wants control. There may indeed be a lot of databases containing our data, but they are quite rightly kept separate and constrained by law. Giving the Government control of all of them by creating a single index would be both unprecedented and dangerous. It is nothing like any other ID system in Europe. ID cards can do nothing to prevent most 'identity fraud'. The claim that they will is itself fraudulent. The ultimate cost of the scheme will be in freedom and privacy."

The cards, which could be issued from 2008, are likely to include a photograph of the holder, along with their name, address, gender and date of birth. A Smart Card chip embedded within the ID card will hold personal biometric information of the cardholder in the form of fingerprint, iris or facial scans. To educate the British public about the technology behind the planned ID cards, the UK Home Office has sent Ministers on a "charm offensive". They are to take part in a seven-date UK Passport Service's (UKPS) "biometric roadshow"around the UK. Home office minister Andy Barnham hopes the tour will help persuade people that ID cards would protect their "personal data and privacy"by raising awareness of biometric technology.. However civil rights group Liberty called the roadshow "yet another desperate attempt to sell Tony Blair's £10bn white elephant". Director Shami Chakrabarti said: "In this world, black is white, night is day, and Mr Burnham says ID cards will protect our civil liberties". She went on to say "This money should be reallocated to policing and national security." Mr Burnham pointed out that the government was working hard to keep down the cost of the cards. He denied reports the price of a card had spiralled to £300. "I'm one of the staunchest supporters of ID cards yet I wouldn't pay £300 for one," he told the News of the World newspaper. "The fact it will not be compulsory to carry them should calm fears the cards would create a "Big Brother" state, Mr Burnham added.

Is the problem really about civil liberties issues or about human paranoia. If big brother is watching, so what? Unless you have something to hide? Illegal immigration, social welfare manipulation, identity theft, terrorism. All these crimes rely on false claims and the use of multiple false documentation. The use of biometrics (unique to an individual) and a single identity card would surely help reduce these problems? Ok, so the Home Secretary has admitted that the purpose of ID cards scheme is to control society. But surely we need a bit more control if we want to prevent these problems. Its a catch 22 situation for the government. We all want to feel safe but we are not willing to give up any civil liberties to achieve it. The UK government has made its choice and it is clear they intended to press ahead with their efforts to improve our security as UK citizens. As a statement from the ministers involved in the roadshow says: "Sitting still is not an option."

Smart Cards

New Standards for UK ID Cards

Any national identity card introduced in the UK will have to meet new international standards for biometrics. The standards body, BSI, has published a set of four new BS ISO/IEC 19794 standards, covering the science of biometrics, using biological characteristics to identify individuals, according to reports. The standards will apply to the biometric technology that is to be added to British passports, and will also cover any future ID card, the BSI says. They will also cover access control and identification systems, such as the information that might be stored on a Smart Card. The aim is to ensure interoperability between the various products that will inevitably come to market, so that data collected by a machine from one vendor can be read by a machine from another, and so on.

G&D Provides e-Purse in Thailand

Giesecke & Devrient (G&D) is supplying Smart Cards to the Thai Smart Card Group (TSC), a joint venture set up by Thailand's largest convenient store chain C.P. Seven Eleven PCL, telecommunications operator True PCL and a number of leading banks, including Krung Thai Bank, Bank of Ayudhya, Government Saving Bank, Siam City Bank and Krung Thai Card. The Smart Card with e-purse functionality, developed especially for the Thai market, has both contact-based and contactless interface. Besides functioning as an electronic purse for cashless payments, the card offers rewards programs and there are also plans to use the card for electronic ticketing in the near future. For Seven Eleven customers, the card will make paying for purchases faster and more convenient in the future.

OTI Completes Acquisitions in China

On Track Innovations Ltd., (OTI) has completed a series of acquisitions in China. In the first transaction, OTI purchased 100% of Pioneer Oriental International, Ltd. (POI), a Hong Kong-based manufacturer of Smart Cards, inlays for Smart Cards & electronic passports, and machinery for the fabrication of such products. The second transaction was for the acquisition of 71.5% interest in e-Pilot Group Ltd., a Hong Kong-based manufacturer of inlays for Smart Cards & electronic passports and Smart Cards. OTI is currently in the process of integrating the newly acquired companies into its operations and anticipates that, as a result of the acquisitions described above, its production capacity will increase to as much as 6 million units per month by the second half of 2006.

NCSA Get Axalto Smart Cards

Axalto is providing the National Center for Supercomputing Applications at the University of Illinois, Urbana-Champaign (NCSA), a non-profit research center for cutting edge computing technologies, with Smart Cards, readers and related software. Among the products donated by Axalto are Cryptoflex and Cyberflex Smart Cards that will enable the NCSA to investigate Windows secure login and secure e-mail applications that extend the use of Smart Cards. Through this donation, Axalto hopes to facilitate the incorporation of Smart Card technology into future pioneering advances in computing developed by the NCSA

ICME Welcomes 6 News Members

The International Card Manufacturers Association (ICMA), a global non-profit association for plastic card manufacturers, personalisers and service providers, has announced the addition of six new members. The new members include one principal member (card manufacturer) - CardSuisse AG (Zug, Switzerland), two personaliser members - Communications Corporation of America (Boston, VA, USA) and Pittsburg Embossing Services (Eighty Four, PA, USA), two associate members - Technical Machine Products (Cleveland, OH, USA) and Fujifilm Sericol USA Inc (Kansas City, KS, USA) and one contributing member - M&M Engineering Consulting Inc (Acton, MA, USA).

JCB Deploys DDA Smart Cards

JCB Co., Ltd and Axalto are collaborating to offer Axalto's Dynamic Data Authentication (DDA)-enabled Smart Cards to JCB customers in Japan. In the banking sector, microprocessor cards based on the EMV (Europay-MasterCard-Visa) international standard are replacing magnetic stripe cards at a fast pace. With the launch of Axalto's Shinflex-J DDA-enabled product, JCB - a major international credit card brand and the largest card issuer/acquirer in Japan, is now able to offer its customers the most advanced and secured platform available today, for access to a whole host of e-payment applications.

Belfast Pilots Smart Card Scheme

The Central Procurement Directorate in Belfast has awarded a contract for the e-Government Unit Smart Card Pilot, which comes under the Northern Ireland Office of the First Minister and Deputy First Minister. CARA Group will develop, test, implement and support a Smart Card pilot for operation in schools, transport, public libraries, and local sports and leisure facilities. The Smart Card pilot will operate in post-primary schools in a defined, manageable geographic area (involving approximately 6,500 pupils). The pilot will be launched in October 2005 and run for approximately nine months.

Keycorp Expands MULTOS Scheme

Keycorp Limited, has announced it has agreed to acquire an interest in a new company being formed to drive the MULTOS scheme. The value of Keycorp's investment would be US$2.4 million. The new company will be established by a group of strategic and financial investors including Keycorp, MasterCard International, Hitachi and venture capital group Oak Hill Venture Partners. The new company will acquire from MasterCard the intellectual property underlying MULTOS and the rights MasterCard has to perform or license Key Management services connected with the initialisation of MULTOS cards and the delivery of applications to those cards. It will also assume management of the MULTOS Consortium and promote the MULTOS standard and brand. The MULTOS specification will continue to be controlled by the MULTOS Consortium and MULTOS will continue to be licensed as an open standard.

NHS Smart Card Upgrade

The current version of the National Heath Service (NHS) Smart Card, enabling NHS staff to access new computer systems under the £6.2 billion health service IT modernisation programme, is to be upgraded from 2006. At this stage it is not certain whether all the existing 65,000 Smart Cards issued so far will be compatible with the new system,

Visa Launches New Brand

As part of its renewed brand framework, Visa International has announced the use of Visa Commercial as a distinct brand in its portfolio to represent Visa's global payment products and information management services division geared toward meeting the needs of businesses and government.

The creation of a distinct Visa Commercial brand signals the first time that Visa has had a committed identity for the commercial space, extending its brand scope and encompassing Visa's broad platform of commercial offerings.

Royal Group Accepts JCB QUICPay

Royal Group, a major restaurant chain in Japan, will be phasing in QUICPay acceptance from October this year. With all Royal Host and Sizzler restaurants nationwide included, 300 locations will be offering JCB's QUICPay contactless payment solution.

HSBC Gives US a Simpler Way to Pay

HSBC Bank USA has begun issuing new debit cards that feature MasterCard PayPass contactless payment technology to its new and existing customers. With the issuance of these new contactless payment cards, HSBC becomes one of the first US banks to provide its customers with this service. The bank expects to issue about 1 million cards through the end of 2005 and will be the first bank to completely reissue its debit cards to include PayPass.

Smart Cards for "Clear" Pilot Program

Oberthur Card Systems has been selected by Verified Identity Pass and Lockheed Martin to issue the TotalIDOne Smart Card solution for use in Orlando International Airport's "Clear" registered traveller pilot program. Lockheed Martin, the technology integrator on the project, has selected Oberthur Card Systems to manufacture and issue all the IDOne Cosmo cards based on Philips Semiconductors' highly secure SmartMX Smart Card IC platform. The Orlando registered traveller pilot program is a fast and convenient system allowing pre-screened travelers to get through airport security quickly using the TotalIDOne Smart Card solution.

New Oz Smart Ticketing Sytem

TransLink, the Public Transit Authority responsible for managing South East Queensland's major transport operators, has begun the first phase of the roll-out of a new integrated ticketing and revenue management system supplied by Cubic Transportation Systems, Inc. Cubic was awarded a comprehensive contract in 2003 to design, build, operate and maintain what will be Queensland's first Smart Card-based integrated ticketing system and regional services for public transport. The Smart Card-based system will ultimately link the region's transportation services to a single Smart Card for payment of fares.

Simpay's Work Must be Maintained

Nimbus Systems, a European billing software and mobile payments company, has praised the standards set by Simpay and expressed its support for the Mobipay consortium that will action them in Spain. Nimbus has also urged the mobile sector to regard the now-dispersed Simpay as a crucial step in its development into a mature industry.

Simpay, which disbanded in June 2005, was a pan-European mobile payments platform set up in 2003 to tackle the billing and payment issues faced by the mobile market. Mobipay is a consortium of Spanish operators and banks that was introduced in 2000 to drive m-commerce. Initially targeted at "macropayments", Mobipay is now implementing the Simpay "micropayments" standard at a national level, placing Spain at the forefront of European m-commerce initiatives.

New Contactless Payments Council

With major U.S. card issuers beginning regional and national rollouts of contactless smart chip technology for fast, secure payments, the Smart Card Alliance has formed the Contactless Payments Council. The Council will work to facilitate the adoption of contactless payments in the U.S. through education programs for consumers, merchants and issuers.The Contactless Payments Council's projects will include web briefings, workshops at trade shows and the development of white papers and case studies.

As a first priority, the Council will be developing short briefings to address areas that are widely misunderstood - notably, how contactless payments deliver additional benefits for payment transactions; what security features are designed into the new contactless payment programs; and what the differences are between RFID technology and the new technologies and methods used to implement secure contactless payments

Prisoners Net Football Smart Cards

Prisoners at a jail in Bahrain have been provided with Smart Cards to watch football matches on the new Al Jazeera sport channels. The UAE-based newspaper Gulf News quoted sources as saying that the inmates sent a formal letter to the prison management on Tuesday, requesting the cards so they could watch European league matches.

R-UIM Smart Cards for TELUS

Gemplus has been selected by TELUS Mobility to develop R-UIM cards that will tie together the Canadian wireless carrier's CDMA and iDEN networks and enable world roaming on GSM networks. R-UIM Smart Cards authenticate and identify individual subscribers on wireless networks, enabling them to freely carry their subscription and personal information from phone to phone, and around the world.

MiPass for Australia Defence Access

BQT Solutions Limited has been awarded another contract to supply its miPASS - Mifare Smart Card reader technology to the Australia Defence Department as part of its further expansion of their buildings access control security systems.

Go Miami Card Launched

Smart Destinations have launched the Go Miami Card. The new Smart Card provids unlimited, fully pre-paid admission to 28 top Miami attractions, plus significant Miami discounts on Florida tours, cruises and Miami shopping.

Company of the Year Award for OTI

Frost & Sullivan has presented On Track Innovations (OTI) with the 2005 Company of the Year Award. The company's exceptional sales and marketing strategies of its microprocessor-based Smart Cards have given it the scale and growth required to succeed in the global contactless card solutions market.

Biometrics

Axalto and Bioscrypt Team

Bioscrypt Inc and Axalto have formed a partnership to provide a Smart Card-based solution for biometric access control. The new solution integrates Axalto's Cyberflex Access Smart Cards with Bioscrypt's VeriSoft Access Manager. Once an identity is established, the necessary information, including a fingerprint biometric, is placed on a single contact or contactless Axalto Smart Card. The card is then used to verify a person's identity and privileges before granting the person both physical access (to a building or place) and logical access (to information or other online resources).

Biometric Access for Candian Airports

A $7-million security system has been installed to screen workers at Canada's main airports, almost three years after it was ordered. The restricted area identification card (RAIC) project will replace the current system which relies on less-secure photo ID cards. The new biometric cards contain a record of an individual's fingerprint and iris information.

The purpose for the RAIC is to match non-passengers, people who are employed at the airport, to a card with biometrics and, with real time verification, confirm that the security clearance is valid.

Pakistan Biometric ID Program

The Government of Pakistan is successfully using Viisage's face recognition technology and finger print technology to fight identify theft and fraud. The National Database and Registration Authority (NADRA), an independent corporate organisation on contract to the Pakistani Government to run the country's smart passport and national ID program, has uncovered multiple instances of fraud to date.

NADRA subsequently issued a country-wide alert in July 2005 through The News, Pakistan's leading English newspaper, notifying those holding fraudulent identity documents that they had been caught and will be pursued if they do not turn in their identity cards.

EMV

First EMV Certification in China

Axalto's Palmera product has achieved the first EMV certification issued in China. Based on the debit/credit specification by People's Bank of China (PBOC), this certification is awarded by the China Banking Card Test Center. It is also fully compliant to the international EMV2000 standard.

With this certification, Axalto Palmera has also become the world's first product that supports Visa, MasterCard, JCB and the latest China EMV applications all on a single card. Among which, China UnionPay, MasterCard and Visa applications are the most used by China banking cards currently.

Thai EMV Cards Gain in Popularity

The Bankok Post has reporetd that Smart Cards are expected to gain in popularity among Thai consumers and gradually replace 80% of the magnetic-strip cards in the financial market by 2010. Currently, only Bangkok Bank and Kasikornbank offer chip cards in Thailand but three additional banks are expected to introduce them by the end of the year. "About 30,000 chip cards have already been issued by the two banks and the number is expected to reach 100,000 by year-end," according to Somboon Krobteeranon, country manager of Visa International (Thailand).

EMV Infrastructure for Malta

Bank of Valletta is implementing a major project using the latest technology that involves the introduction of EMV acceptance infrastructure in Malta. This involves new point-of-sale devices and management systems through which retailers now have the possibility of accepting Chip and PIN card transactions. BOV is deploying a variety of state of the art EPOS terminal models across its merchant network, each being better suited to support the unique needs of establishments in different lines of business.

Keycorp Help Saudi EMV Migration

Saudi Arabian Monetary Agency (SAMA) has selected Keycorp Limited as the technology provider for the national migration to Europay MasterCard Visa (EMV) Smart Cards in the Kingdom of Saudi Arabia. After several years of detailed evaluation, SAMA has now settled on Keycorp to develop the EMV-compliant domestic debit application and to supply MULTOS technology, which will also support Visa and MasterCard's international EMV debit applications to the issuing banks in the Kingdom.

Qatar National Bank Ready for EMV

ACI Worldwide has licensed its ACI Smart Chip Manager software to Qatar National Bank (QNB). The software will enable Qatar's largest bank to introduce new Smart Cards and comply with forthcoming EMV international standards in advance of the January 2006 compliance deadline for the Middle East and Africa. The software will provide QNB with the ability to fully manage the lifecycle of each EMV Smart Card, from issuance to application parameter setting and adjustment.

Radio Frequency Indentification

Critical Nature of RFID Recognised

According to an industry survey, a majority of US supply chain executives consider radio frequency identification and Electronic Product Code (EPC) technologies important to their companies' supply chain management operations, with more than 85% of respondents deeming the technology 'extremely important,' 'very important,' or 'somewhat important.'

The survey also revealed that 99% of those who consider themselves familiar with EPC/RFID technology cited the technology as 'extremely,' 'very' or 'somewhat important' to the future of supply chain management. The survey noted that overall, manufacturers are slightly more likely than retailers to recognize the importance of the technology, with 87 percent of manufacturers considering RFID/EPC 'extremely,' 'very' or 'somewhat important' compared to 80 percent of retailers who chose those descriptors. The survey, commissioned by EPCglobal US, tapped into the opinions of more than 400 US supply chain executives across multiple industries, including advanced manufacturing, consumer products, healthcare and life sciences, retailing and other major industries.

Infineon Transfers its RFID Business

Infineon Technologies AG has transferred its activities in the area of RFID software solutions as part of a management buy out to RF-iT Solutions GmbH, which has its registered office in Graz, Austria. This means that patents, trademarks, licenses, development hardware and software, as well as current customer projects and RFID demonstration applications have been transferred to RF-iT Solutions. The parties have agreed not to disclose the purchase price.

New RFID Centre in Rotterdam

LogicaCMG has officially opened its Radio Frequency Identification demonstration centre in Rotterdam, The Netherlands. The centre features the 'connected enterprise' with practical implementations of RFID displayed in a virtual manufacturing and supply chain environment, using today's technology to demonstrate seamless integration of RFID with back office management systems.

This is the first European facility to showcase end-to-end integrated RFID technology which are deployed by leading organisations worldwide, and demonstrate the results that can be achieved from a fully streamlined, real time supply chain architecture.

US Govt Orders RFID Printers

As part of the US Government's initiative to improve efficiency and inventory asset management, Intermec Technologies Corp., which designs and manufactures RFID and mobile computing systems, has been awarded a Blanket Purchasing Agreement to provide RFID printers and related equipment to support the Department of Defense and the US Coast Guard. This award is the fourth AIT RFID award resulting from a government request for quotation issued in December 2004. Earlier this year, Intermec was granted BPAs to provide RFID tags, readers and technical engineering services.

Financial Results

OTI Reports 2005 Results

On Track Innovations Ltd (OTI) has announced its consolidated financial results for the six months ended June 30, 2005. Revenues for the first six months increased to $14.3 million from $9.9 million for the same period of last year. Revenues for the second quarter of 2005 were up to $7.8 million from $4.6 million in the second quarter of 2004. The increase is mainly due to sales in the payments market.

Operating loss for the six months ended June 30, 2005 decreased by 20% to $(4.5) million from $(5.7) million in the same period in 2004. Net loss for the six months ended June 30, 2005 decreased by 21% to $(4.7) million, from $(5.9) million for the same period in 2004. Cash and cash equivalents and short term investments were at $30.3 million compared to $28.5 million on December 31, 2004.

Trintech 2nd Quarter 2005 Results

Trintech Group PLC expects revenues for the second quarter, ended July 31, 2005, to be in the range of $12.25 million to $12.75 million. Revenue is lower than previously expected primarily due to a slowdown in demand for Chip and PIN (EMV) solutions in Europe and delays in the adoption of EMV unattended payment solutions. Trintech generated net income for the second quarter of $225,000.

ICE Reports 2nd Quarter 2005 Results

International Card Establishment, Inc (I.C.E.) has announced its second quarter results. For the quarter ended June 30, 2005, the company generated net revenue of $3,946,501, as compared to net revenues of $3,532,382 for the quarter ended June 30, 2004. For the quarter ended June 30, 2005 and June 30, 2004, the company reported net losses of $(145,101) $(0.00 per share) and $(615,028) $(0.02 per share), respectively.

SAFLINK's 2nd Quarter 2005 Results

SAFLINK Corporation has reported its financial results for its second quarter ended June 30, 2005. Revenue for the second quarter of 2005 was $1.8 million, compared to $2.2 million for the first quarter of 2005 and $918,000 for the second quarter of 2004. SAFLINK reported a net loss attributable to common stockholders of $6.6 million, or $0.08 per share, in the second quarter of 2005. This is compared to a net loss attributable to common stockholders of $6.8 million, or $0.09 per share, in the first quarter of 2005, and a net loss attributable to common stockholders of $2.4 million, or $0.07 per share, in the second quarter of 2004.

SCM Reports2nd Quarter 2005 Results

SCM Microsystems, Inc has announced results for its second quarter ended June 30, 2005. Revenues in the second quarter of 2005 were $10.2 million, within the range of management guidance of $8 million to $12 million. This compares with revenues of $11.5 million in the second quarter of 2004. By product segment, second quarter 2005 revenues included $4.5 million from sales of Digital TV security modules, $3.6 million from sales of Smart Card readers and other products for PC and network security, and $2.1 million from sales of OEM flash media reader technology.

PubliCARD 2nd Quarter 2005 Results

PubliCARD, Inc, has reported their 2nd qauarter financial results. Revenues for the second quarter of 2005 decreased to $909,000, compared to $1,028,000 in 2004. The Company reported a net loss for the quarter ended June 30, 2005 of $453,000, or $0.02 per share, compared with a net loss of $783,000, or $0.03 per share, a year ago. As of June 30, 2005, cash and short-term investments totaled $1,173,000.

On the Move

New President of Gemplus China

Gemplus has appointed Suzanne Tong-Li as President of Gemplus China, reporting to Martin McCourt, President of Gemplus Asia. Suzanne Tong-Li has ten years experience in the Smart Card sector, including several years focused on Asian markets.

Cross Match Employ New CEO

Cross Match Technologies has appointed The Honorable James W. Ziglar, former Commissioner of the Immigration and Naturalization Service (INS) and a senior executive at UBS Financial Services, Inc., as its new CEO.

New Chairman & CEO at Smart Chip

Smart Chip Technologies has announce that the Airos Group's President Miki Radivojsa has agreed to join Smart Chip Technologies as its new chairman and CEO. As president of the company's development partner Airos, Radivojsa has been operating as Smart Chip Technologies' product development manager for nearly three years. SCTN Founder and outgoing Chairman and CEO David Simon will remain as a director and chief product architect, and will work alongside Radivojsa throughout the transition.

Co-CEO Leaves ASSA ABLOY

Ayman Ashour has departed from ASSA ABLOY and his role as co-CEO of Identification Technology Group. Mr. Ashour leaves after spending one year as co-CEO of ITG and three prior years as a Strategic Business Development consultant to ASSA ABLOY. Joe Grillo, Chairman of ASSA ABLOY ITG, will step in as acting co-CEO of ITG.

New Director of Operations at HID

HID Corporation has promoted Peter Stevens to director of operations for the Europe, Middle East and Africa (EMEA) region based in Haverhill, UK.

FacePrint Appoints New CEO

FacePrint Global Solutions Inc. (FGS) has appointed: Serge Carrier as the new Chief Executive Officer, while California businessman Jean Houle joins FGS's Board of Directors.

Testing of RFID At US Ports Could Have a Chilling Impact on Privacy

While the U.S. Department of Homeland Security is lauding the potential benefits of a pilot program using radio frequency identification technology at some U.S. points of entry, it's also playing defense in what is sure to be a swift reaction from anyone concerned about the erosion of privacy.

Early this month, the department announced it had begun testing the next phase of the US-VISIT program that involves radio frequency identification technology to record the entries and exists of business visitors, tourists, students and temporary workers that are issued entry cards (known as I-94 forms) at land borders. Ports in Arizona, New York and Washington State will be testing the new system through early summer of next year.

US-VISIT involves the collection of biometric and biographic information from nonimmigrant entrants at visa-issuing ports throughout the world as well as those using air, sea and land ports in the United States. The next phase of the pilot will involve the placement of RFID tags that are embedded in the standard arrival and departure record issued at all ports of entry.

Every visitor holding nonimmigrant visas, anyone entering under the Visa Waiver Program, as well as Mexican Border Crossing Card holders planning to stay longer than 30 days and/or travelling outside the border area, will be issued the new form.

In its announcement, the government went to great lengths to issue assurances that it will carefully guard how the information is used. Officials said only authorised government officials will be able to link the tag numbers to the visitors' biographic and biometric records.

However, anyone concerned about their privacy should be worried, said Angelo A. Paparelli, managing partner of Paparelli & Partners LLP, an immigration law firm with offices in Irvine, California., and New York City. "What's to stop the Department of Homeland Security from having these readers at every commercial airport and monitoring the movement of any foreign traveller who may be within 30 feet of a domestic US airport?" he said. "They could put them at every passenger screening location, and people would not know they're being screened and could be profiled or apprehended based on their immigration status or national origin."

In a bill passed last year restructuring the nation's intelligence-gathering resources, a provision was written to ensure privacy will be protected. That bill provides for the appointment of a civil rights and privacy board; however, no members have been appointed to date. Paparelli says that while the program is not necessarily the wrong approach, it definitely presents troubling consequences that merit close study to ensure a balance between security, privacy and the nation's global business interests.

"If this program were expanded to all U.S. land border posts and airports, the government would know quite a bit about every foreign citizen walking around. We would essentially be sending the message that when you're in the United States, you're going to be tracked," Paparelli says. "At the end of the day, maybe it's the right idea, but we need to think about the implications of law-abiding visitors and workers from abroad finding America to be an unwelcome place."

Forerunner of the E- Society

Giesecke & Devrient

By Wolfgang Effing, Head of the Technology Center at Giesecke & Devrient (G&D)

Wolfgang Effing

Passwords are passé, the future belongs to Smart Cards," said Microsoft's Bill Gates recently at an IT forum for his group in Copenhagen. Specifically, Gates identified one of the problems as being the weakness of passwords when it comes to transporting or exchanging secure information. Smart Cards, however, are a different story. Secure storage of electronic keys and the use of biometric processes for identification, a process that will be introduced this year (for example: in the U.S., for its ID documents) offer countless new alternatives.

Microsoft itself wants to, in the near future, provide all employees with Smart Cards that will give them access to office buildings and computers. "We will soon be able to dispense with passwords altogether," predicted Gates. The main reason for this development lies in the continuing increase in the capacity of Smart Cards. The small chips are already available with 32-bit processors, offering roughly the same performance as that of a 386 PC processor.

According to the so-called Moore's Law, which experts predict will remain valid for another 10 years, the storage capacity will double every 18 months. However, the combination of biometric processes and contactless technology offers a whole range of new opportunities on the subject of security and authentication. One example of this is the use in the U.S. of the latest chip technology in conjunction with RFID for electronic passports.

Although those concerned about data protection still currently see problems with this form of passport control, numerous other Smart Card projects, such as the electronic health card or job card, demonstrate the potential of this technology and should ensure a continuation in the growth of the market for Smart Cards, currently between 15% and 20% per year. There are a number of experts who even believe that intelligent storage media might be the main forerunner of the evolution from today's information society toward the so-called e-society. International cooperation arrangements-such as the introduction of a citizen's card for all EU citizens-could drive this development forward.

The future potential applications for chip cards are influenced both by social as well as technological trends. This is because Smart Cards have previously been used primarily in telecommunications and payment transactions, the increasing performance capability also opens up numerous additional areas.

In this context, experts see the most important development being the innovation of future chip cards that are able to drive Internet protocols themselves and consequently can be directly integrated into existing IT systems without any circuitous routes or additional software. In addition, Smart Cards will be able to utilize an ever increasing number of mobile services and applications.

In conjunction with any terminal, the chip card will become the multifunction tool for personal communication and identification. Smart Cards are developing into a Trusted Personal Device for the storage and retrieval of entirely individual information. Users will benefit in particular from the practical added value that will make both their everyday working and private lives that much easier-bringing a new level of quality to mobility.

However, the rapid increase in digitalization and networking as well as the ability to access multimedia information from anywhere in the world also calls for more enhanced security services which up to now have required the use of passwords or access codes. The greater the convenience for users the more difficult it becomes to solve security problems.

Here again, however, new solutions are offered by Trusted Personal Devices (TPD) with corresponding computing and storage capacity. Although secure links (for example, to a bank's server) can already be created using additional devices such as an HBCI reader, up to now only individual solutions have been available for these type of transactions, which still require special software to be installed on the user's PC. Combining powerful Smart Cards and biometric processes brings a whole new dimension to the subject of security

As such, the security technology used in Smart Cards can be combined with, for example, so-called token systems for certificate or authorisation retrieval in a rules-based system. In the process, a secure link is created via a Public Key Infrastructure (PKI), with the cardholder identifying him-/herself to any server without having to use a password. The server identifies the participant by his/her personal security device. Other security functions can also be used, such as the electronic signature or encryption of specific information. This rules out the possibility of so-called phishing. In the future, Smart Cards will even be able to offer security services themselves.

However, security risks are present not only in the networks to which the individual has logged on using a Smart Card. The chips themselves can also be the target of physical or computerized attack. The chip industry is therefore putting greater effort into designing processes to make the storage media itself more secure. Smart Cards can in fact even now be programmed in such a way that they selfdestruct in the event of an attack. The security standards can be realized using either the SIM (Subscriber Identity Module) card in the mobile phone or via the new generation of chips on the debit and credit cards.

It is unclear at the moment who will be the first to offer the new services. Banks are giving corresponding consideration to making existing structures available to other market participants. However, the telecommunications sector obviously also has an interest in offering additional functions such as admittance controls or ticketing for local public transport. The reason for this is that these services not only increase the attractiveness of the Smart Cards but also in particular the attractiveness of the provider's own offering.

Events Diary

October 2005

1 - 2nd	eyefortransport RFID Opportunities for Transport and Logistics Providers - *Las Vegas, Nevada, USA - http://www.icma.com/meetings/annual-expo.htm*
6th	Radio Rrequency Identification 4 Reatilers - *London, UK*
10 - 12	RFID Journal Live Europe - *Amsterdam, Hotel Okura - www.rfidjournallive.com/europe*
16-19	ICMA EXPO - *Miami, Florida - http://www.icma.com/*
17 - 19	Banking Technology - *Budapest, Hungary*
18 -21	2005 Annual Fall Smart Card Alliance Conference - *Miami, Florida, USA - http://www.smartcardalliance.org/*
25-28	Cards Africa 2005 - *Johannesburg, South Africa - http://www.worldofcards.biz*
25-26	Digital Identity Forum - *London, UK - http://www.clyp.com/digid/index.htm*

November 2005

01-03	The Fall 2005 Biometrics Summit **-** *New York - http://www.aliconferences.com/conferences/biometricssummit1105/1105.html*
3 - 4	ID World - *Rome, Italy - http://www.idworldonline.com*
07-08	The Financial and Payment Services Leadership Summit - *Toronto, Canada - http://www.sourcemediaconferences.com/conferences/FSLS05/en/*
9 - 10	Infosecurity - *Utrecht, the Netherlands - www.infosecurity.nl*
15 - 16	CARTES 2005 - *Paris-Nord Villepinte Exibition Center - http://www.cartes.com/en/2005/index.htm*
28-29	Prepaid Cards in Europe 2005 - *Le Meridien Piccadilly, London - http://www.prepaidcardseurope.com*
29th	European "RFID Solutions Today" Conference - *De Kuip, Ameterdam*

Exploiting EMV Risk Management

By Mike Woods, CEO, Aconite Technology

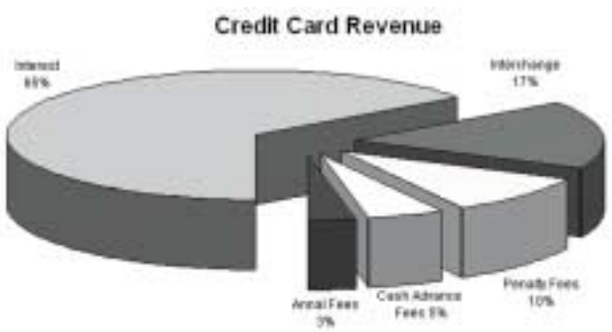
Mike Woods

Successful card issuing, like any other aspect of the banking industry, is about managing risk. 'Managing' does not mean 'eliminating' risk (impossible anyway) since in the business of advancing credit, the gains can be proportional to the risk taken. The objectives are to maximise revenue while minimising losses and the cost of managing the portfolio. The successful card issuer uses all the tools available to achieve these goals, and the introduction of EMV Smart Cards adds significantly to that toolkit. EMV introduces features that control how cards behave. EMV allows the card issuer to control the outcome of transactions that may be completed off-line and to modify the way the card will behave in future.

Ask people in the cards business what EMV is all about, and the reply invariably concerns fraud and security. While it is true that fraud prevention -- attacking the use of cloned, counterfeit and stolen cards - formed the initial justification for the migration to EMV in markets where card fraud was (and in some cases remains) prevalent, such as the UK, it is in the potential to control risk where EMV's real value will be realised. Many card issuers have so far neglected this opportunity and have yet to understand the potential for EMV to deliver significant bottom-line benefits. Migration to EMV has been seen as a technology-led initiative and has been sponsored by IT and/or compliance departments. Risk managers have largely been left out of the loop. That situation is now changing amongst switched-on card issuers.

In the world of magnetic stripe cards, an issuer's ability to control how their cards are used is severely limited and once the card - a passive token - has given up the information stored in the magnetic stripe, it (and the issuer) plays no further part in the decision-making at the terminal. A transaction will be sent on-line for authorisation only if terminal rules dictate. Card issuers have little or no influence on the content or application of those rules; guidelines for terminal floor limits and random selection for authorisation may be adopted at scheme or association level, but acquirers and merchants can (and do) manipulate these 'rules' in the search for competitive advantage over other acquirers and merchants, balancing this advantage against the risk of chargeback. The interests of card issuers come some way down their list of priorities.

EMV Smart Cards turn that situation on its head; the card becomes an active component, giving the card issuer a controlling presence at the point of service. The decision to go on-line for authorisation is taken away from the terminal, and therefore away from the acquirer. Most importantly, the card issuer can dynamically control card state and behaviour through EMV scripting - post-issuance updates to the card that are sent as part of the response to an on-line authorisation request.The objectives of card risk management differ between the credit card business and debit card issuing. Credit cards offer revolving credit up to a limit with a minimum monthly repayment whereas debit cards are intended primarily as current (checking) account access devices, although borrowing up to an overdraft limit may be allowed. The credit card issuer wants to maximise the level of borrowing while ensuring that the cardholder is able to continue making the minimum repayment. The debit issuer wants to keep the account "in order" and to balance customer service against the risk of unauthorised spending which may lead to bad debt.



In a breakdown of revenue for US credit card issuers in 2003. Interest payments make up the major portion (65%), driven by cardholders allowing an outstanding balance on the account to revolve. This will remain the case, despite recent trends towards an increase in penalty (late payment and over-limit) charges to compensate for reduced interest and annual fee income resulting from special offers to entice new cardholders, who seem only to look at the headline APR when applying for a new card. On the cost side of the business, the largest single cost is write-offs resulting from bad debt, amounting to 43% of all costs across the same group of card issuers, with operating costs trailing at 38% and the funding of outstanding balances at 19%. So the card issuer faces a dilemma: revenue, directly and indirectly, is driven by card usage, which must therefore be encouraged; risk, which ultimately leads to those write-offs, is introduced by unauthorised card usage, which must therefore be prevented. Unfortunately, card usage does not take place in a perfectly controlled environment; depending on the territory, a certain proportion of transactions will take place at off-line devices.

The figures quoted relate to the US market in which point-of-sale spending is almost 100% on-line and authorised by the card issuer; in markets where a significant proportion is off-line, such as the UK, the exposure to risk and therefore potential bad debt is much greater. However, the trend in the global market is towards more off-line transactions. Indeed, the ability of merchants and acquirers to expand card usage opportunities is, to an extent, dependent on a growth in off-line devices forming a major part of that expansion, GPRS, Wi-Fi etc. notwithstanding. This is especially true in markets where the telecoms infrastructure is either expensive to use (e.g. Europe), unreliable (Middle East) or non-existent (large parts of Africa). The ability to perform secure off-line transactions - genuine card, genuine cardholder - will lead to significant growth in card usage in areas such as vending and ticketing and where low value payments make it uneconomic to go on-line for authorisation.EMV provides some resolution of this dilemma by effectively extending a part of the card issuer's authorisation processing from their host systems onto the card and into the device. The issuer is now represented at the point of service and can therefore implement elements of their risk management policy at the card level, on a card-by-card basis.

The mechanisms that EMV provides for risk management, as opposed to fraud prevention, have been augmented by the card schemes' own features and are largely based on controlling the amount of off-line usage that a card will permit before forcing the transaction on-line for authorisation. This control can be based on both the number and the accumulated value of consecutive off-line transactions. When thresholds set by the card issuer are crossed, the transaction can be forced on-line. If, for some reason, the device is unable to go on-line, the card will either permit or decline the transaction, again according to the card issuer's settings. However, these controls would be a fairly blunt instrument were it not for the card issuer's ability to vary the parameters that determine the outcome of the card's risk management processing on an individual card-by-card basis. This is achieved by sending scripts to the card during an on-line transactions to update these parameters. It is when this ability to dynamically control card behaviour is teamed with a risk management system that is monitoring the level of risk at account or cardholder level that the power of EMV is really unlocked.

Before EMV, the card issuer had to rely on the card coming on-line for authorisation; a decision based almost entirely on the value of the transaction or the type of terminal, and was then able to make an 'approve' or 'decline' decision based on a risk assessment of that transaction in the context of the cardholder's account status and behaviour. EMV allows that process to be much more granular and for action to be taken earlier in the cycle of events. When risk management processing detects that an account is in the early stages of going from an acceptable to an increased risk, subtle changes to card behaviour can be made by returning an EMV script. The range of risk-based card profiles - combinations of the EMV risk parameters that will result in pre-determined card behaviour - can be broadened to provide this granularity.

A card may be moved through five or ten or even more profiles as cardholder behaviour is monitored, since progressively increasing the frequency with which the card comes on-line not only provides the issuer with more opportunities to decline a transaction, but before that stage is reached, additional data on which to base successive risk assessments will be gathered. 'Micro-management' of an account in this way will reduce both the issuer's exposure to bad debt but will also allow the issuer's risk management processes to determine with greater accuracy when to take the decision to decline which on the one hand, may prevent an unrecoverable debt, but on the other may irretrievably damage the relationship with a potentially profitable customer. The converse also applies as an account moves back from a position of heightened risk.

The severity of the risk profile can be reduced progressively, continuing to provide enhanced account monitoring information while the risk remains higher than normal. It can be seen, therefore, that the migration to EMV cards not only attacks the immediate issues of counterfeit and lost and stolen fraud, but opens up a new dimension in the management and control of risk for both credit and debit card issuers. EMV scripting supports the introduction of a dynamic card risk profiling approach that gives issuers an unprecedented degree of control. This in turn requires new ways of using risk management tools, whose strategies and outcomes can now be fine-tuned to manipulate card behaviour, in addition to initiating account management actions and making authorisation decisions. Forward-thinking issuers who grasp this opportunity and take advantage of these features will gain competitive advantage by reducing the cost of referrals, collections and write-offs, ensuring that optimum use is made of credit lines and ultimately using the enhanced control of risk to extend card issuance to previously off-limits applicants.

Speeding Up EMV Migration Will Drive Market Growth

The varying pace of migration to Europay, MasterCard, and Visa (EMV) across the globe has had a huge impact on the sales of electronic funds transfer/point of sale (EFT POS) terminals. While this migration has been quite fast in western Europe, Latin America and the Asia Pacific, terminal manufacturers are hard-pressed to find a more compelling business case (apart from fraud prevention) to sustain market share and profitability in North America. A study by Frost & Sullivan, reveals that revenues that the EFT POS Terminal Market totaled $863.2 million in 2004 and projects to reach $1,567.3 million by 2011. "In many European countries, such as Italy, Germany and Spain, less than five percent of the entire installed terminal base is EMV-compliant," observes Frost & Sullivan Research Analyst V. Aravindh. "With these regions charting out an EMV migration implementation plan by the next year-and-a-half, the EFT POS terminal market is expected to receive a significant boost in the future."

Terminal manufacturers need to concentrate on countries such as China, India and Russia for long-term profitability where there is increasing adoption of electronic payments due to infrastructure development, strong government support, and the expanding presence of wireless networks. However, in order to drive uptake in North America that has minimal fraud occurrences and a large legacy infrastructure for magnetic stripe technology, terminal manufacturers will have to offer a better value proposition. "While price is a key differentiation factor, manufacturers need to start considering other parameters, such as enhanced software application delivery and customer services, to boost revenues," says Aravindh. Online debit and personal identification number (PIN) pad sales are areas that are likely to offer manufacturers an opportunity to increase market share and spur terminal sales in North America.

In addition, value-added services, such as gift, loyalty, e-commerce, advertising, couponing and electronic receipt capture (ERC) programs, are expected to augment revenues and improve profitability. Leveraging the popularity of IP-enabled technology for payment terminals is also likely to offer a substantial competitive advantage for manufacturers in terms of "always-on" connectivity, high-speed communication in wired and wireless networks, and lower cost of support. Contactless payment is another rapidly emerging technology, which is likely to spur sales of POS terminals, particularly in the quick service restaurant (QSR) segment. "Contactless payment using radio frequency identification can save up to 10 to 12 seconds per transaction, resulting in increased throughput," explains Aravindh. "The QSR segment, having a terminal penetration of less than 15% in the United States, presents a significant opportunity for manufacturers in the coming years."

Card Manufacturing Trends

By Jeffrey E. Barnhart, ICMA Co-Founder and Executive Director

Jeffrey E. Barnhart

The global plastic card industry continues to experience growth as technological advancements and innovations respond to ever-changing consumer and business requirements worldwide. As companies continue to develop new systems to control information and steer consumers toward purchasing, the plastic continues to survive after almost fifty-yearsAs new technology surfaces in several industries, so does the use of the plastic card as a major component. Plastic cards continue drive advancement in industries such as banking, security, healthcare, payroll, RFID and telecommunications with GSM and SIM cards leading the way. .

In addition, the most popular of all plastic cards continues to be retail gift cards, debit and loyalty cards because of their appeal to control spending. In fact, the Coinstar National Currency Poll shows that the broader trend towards giving gift cards is being driven largely by young adults, ages 18 to 44, who view gift cards more favorably than earlier generations, for almost all gift-giving occasions. Other key findings include the fact that three out of four (74%) 18 to 34 year olds would be happy getting a gift card for graduation, and four out of five (82%) people see birthdays as perfect occasions to receive gift cards. The most desirable cards include universal gift cards, department store cards, dining or entertainment cards, clothing store cards and electronics cards.

Michael Swiecicki, president of Illinois, USA-based Lighthouse Point Associates Inc, an industry consulting firm, expects the entire plastic card industry to experience double-digit growth over the next three years as continued popularity of bank cards, pre-paid debit cards, loyalty cards, payroll cards, secure ID cards, RFID, and gift cards continue to be robust." Consumers are very aware that they can control their spending habits by being able to budget their money based upon the amount on their debit card. In addition, parents are utilizing debit cards to teach their children how to manage their money by only loading a fixed amount on the card. As a result, worldwide production capacity has significantly increased especially in North America and Asia over the past 18-months.

Plastic card capacity is also being affected by mandates from both Visa and MasterCard to change their card design by removing the hologram from the front and replacing it with a new Holo-magnetic stripe to the back of the card. As branding and card identity become more competitive between the card issuers, advertising space to the front of the card becomes a valuable commodity. It's expected that secure card manufacturers will be kept extremely busy over the next 24-months focused on reissuing the new card designs.

Another important factor will be the continued popularity of the retail gift card in Europe. European manufacturers are already planning to increase their production capacity over the next two-years by adding finishing equipment to keep pace with demand. Nick Cooney, president of Versatile Card Technology (VCT), an Illinois, and U.S.A.-based card manufacturing company has a slightly different opinion. "We are experiencing an uptake in loyalty and gift card productions for Europe and Asia; whereas in the North America market, we are experiencing a plateau for these cards."

"Debit card growth also continues to soar, as companies find innovative ways to utilize cards to enhance their business. Another important trend is how retailers are pushing customers to use their credit card in place of a debit card due to high transaction fees incurred when a debit card is used. In many cases, retailers are adding substantial charges to the transaction because of the fees they incur from the banks for managing the transaction," adds Swiecicki. Due to the many large mergers and acquisitions that have occurred recently, the banking and financial sectors continue to see the largest uptake. "Many financial institutions are starting to create a new image as well. We're also seeing some increases in private label cards in the retail sector," adds Cooney, "particularly in home improvement and specialty retail stores."

Fastest Growing Categories - The plastic card industry is also experiencing a significant increase in direct mail cards. "However, alternative products, such as paper, are being evaluated in the phone and direct mail industries to lower overall costs," said Eric Blank, executive vice president of Arthur Bank & Company, based in Boston, MA, USA and the largest producer of private label plastic cards in North America. "Europe in particular has experienced much progress in EMV card migration, and telecom card markets have been steadily rising," added Herbert Grün, director of card engineering solutions, of Munich, Germany-based Giesecke & Devrient, a leading plastic card manufacturer and globally operating technology group.

"We have also seen a growth in new form cards, as well as increased demand for government and corporate ID sectors. This presents significant opportunities for the card manufacturing industry," he explained. Other growth areas, particularly in Asia and Latin America, include CDMA with R-UIM mobile phone cards.

New Markets - According to Cooney, the industry will definitely experience new challenges with RFID and RFID EMV for the banking sector, which are being introduced in last quarter of 2005 and into 2006. "From the manufacturing standpoint, these new markets will require the most significant technological changes in the industry in a long while," he said. "GSM, SIM and biometric cards continue to increase, with RFID taking the lead," added Swiecicki. "The two largest growth areas for RFID cards will be East Asia and the United States." There is also a growth in the use of mobile phones technology using RFID. Several Asian countries are now offering this technology as a replacement for the plastic card. Another new and exciting technology being introduced next year is applying DNA onto a plastic card for high security environments. As an example, the DNA can be extracted from a tree leaf giving the customer a unique signature that is impossible to duplicate. This technology brings a new level to the security industry. Additionally, according to Grün, e-passports with integrated personalized card-like pages are also on the horizon.

Trends in Style, Printing and Materials - As indicated previously, both Visa and MasterCard have designed new holographic magnetic stripe cards and designs. "The new design criteria opens up more space on the front of the card for banks to utilize the space for marketing purposes," explained Cooney. "This, in turn, will generate many redesigns, which could potentially become re-issues for larger financial institutions."

"Trends of plastic cards printed with a gloss coating on both styrene and even paper are on the increase due to ease of entrance by commercial paper printers converting their equipment over to plastic because of the eroding market in commercial printing. Another important factor to consider is the competitive environment of cards in the US market. The US is the number one producer of plastic cards in the world, but is at the bottom in total dollars," added Swiecicki. "Other changes we can expect to occur include a wider use of Smart Cards, as the JAVA based operating system platforms become more prevalent, and PET cards, which will definitely be coming on strong," said Grün.

Manufacturing Technological Breakthroughs - From the printing side, UV waterless inks are now predominately used by the majority of card manufacturers. "These are more environmentally friendly and allow for better quality printing with less spoilage," explained Cooney. "As well, ISO certification and recognizing Six Sigma philosophy are extremely important. By working with customer partners and instituting Six Sigma education and training throughout the company, card manufacturers can reduce costs." Other breakthroughs, Swiecicki notes, include the increased use of digital printing for quantities up to 10,000 cards. Digital printing allows for fast turnaround by avoiding lengthy and costly set-ups that incur using conventional manufacturing methods. Digital printing and plastic card finishing equipment costs have sharply decreased over the past 12-months, allowing entrance by companies who have historically shied away due to the high equipment cost in past years. "With systems starting as low as 240,000 US dollars, it becomes more economical and attractive for small printers to enter the plastic card market.

A Look to the Future - No matter which market segment you focus on - gift cards, loyalty cards, security cards, ID cards, financial cards or credit cards - all plastic cards are universally appreciated for their durability and convenience. Manufacturers continue to steer the way, putting extra effort into research and development; implementing new, cutting-edge applications and meeting the needs of a vast, demanding and ever-growing marketplace.

Ready, Edy, Go!

By Jason Smith, Staff Reporter, Smart Card News Ltd

Jason Smith

The euro, dollar, yen (The Edy) contactless cash system was developed in 1988 as a solution for logistics companies. This system soon changed course to become one of the most widely used Smart Cards in Asia. The Edy card is a contacless integrated circuit (IC) card and was designed by none other than Japan's Sony, a company far more famous in the consumer electronics space than in the transportation industry.

The Edy card was produced under the name "FeliCa". FeliCa technology which is at the heart of the Edy card was adopted for this system after Sony's extensive success in Hong Kong, where they have delivered over 12 million FeliCa Smart Cards to Octopus Cards Ltd to be used in the countrys travel and retail payments card. Sony has also seen success with this technology through their development of East Japan Railway's "Suica" IC-based commuter Smart Card used for travel payments.

Edy is a 'contactless' Smart Card, meaning that you wave the card no more then 10 centimeters away from a readers surface without even removing it from your wallet.

The Edy system debits its users' stored-value accounts when the card is waved near the sensor. A process describe by Kazumasa Miyazawa, vice president of business planning of bitWallet as being "much faster than that for credit cards."

The Edy card can store up to 40 different applications, including transit, e-money, credit and debit functions, building access and ID. The Edy card is currently the only contactless stored value Smart Card certified to ISO15408 EAL4, an international standard for security systems, and the aim is to penetrate coin-dominated locations like parking lots, fast food and convenience stores. "The target market is anything to do with micropayment," says Kazumasa Miyazawa.

The pilot for this new technology took place in a Tokyo shopping mall, where all the merchants were fitted with readers and consumers were handed the card. The pilot was so successful that Sony set up BitWallet in January 2001, a separate company, with other investors including a group of banks and NTT DoCoMo Inc, Japan's biggest mobile phone services company, to develop and manage the Edy prepaid Smart Card system. Sony owned 46% of BitWallet, while NTT DoCoMo had 14.7% and Sumitomo Mitsui Group owned 11.9%.

The company's main aim was is establish an infrastructure base of money depositing terminals and promote the widespread use of personal terminals with card reader/writer capabilities. Bitwallet stated that they would work to establish a user base of 30 million cards, 25,000 real outlets, 30,000 cyber outlets, 1 million vending machines and 15 million personal terminals by 2006.

By end-2003, Bitwallet's Edy system had 3.4 million users, and was accepted at 3,400 retailers. Games maker, Sega Corp, now offers Edy payments at 100 games machines at a Tokyo arcade, and within 3 years, all 500 Sega-affiliated games complexes will take Edy cards.

By 2004 Bitwallet had provided an estimated 8.5 million cards and had 23,000 customers. The mobile version of the Eddy e-purse called Mobile Eddy" comes preloaded on phones embedded with contactless chips and antennas. The phones where sold by NTT DoCoMo, which launched its i-mode FeliCa "mobile wallet" in July 2004.

BitWallet state that more than 1 million consumers have activated the e-cash application (Mobile Edy) for use on their mobile phones to date. According to published reports overall monthly Edy transactions top around 10 million every month. Each transaction for the Eddy card is around 400 yen ($3.80) with Mobile Edy transactions roughly running about 20% higher.

Currently about 20,000 merchants in Japan accept Edy cards and Mobile Edy. "We want to see the card become a global currency," says Mr Miyazawa. Recently in 2005 BitWallet widened its market when 1,400 AM/PM stores in Japan started issuing 1.4 million cards to their customers.

Before BitWallet started widespread roll-out of the Edy system, Hong Kong transit card system operator, Octopus Cards, began working on extending its system into a broader e-money service.

The Octopus card is now accepted at 7-Eleven and Circle K convenience stores, Starbucks coffee shops, Cafe de Coral restaurants and other fast food, cake shops and Coca Cola vending machines with future plans to extend the system to cover taxis and highway tolls. Such transactions still account for less than 10% of daily use, according to Octopus Cards. In contrast, the Edy system in Japan is not affiliated with the rail pass, although each uses a technically identical card and there is no technical reason why the two functions cannot live side-by-side on a single card.

For now, Edy is still in its early stages, but is still growing and the AM/PM convenience stores deal shows this. However, for the Edy system to become truly useful, there needs to be more cooperation between card issuers so that different applications can be easily loaded onto single cards. Governments might have a role to play here!

While combing JR East's Suica and BitWallet's Edy services on a single card is easy in technical terms, legislation makes it all but impossible. Local law stipulates a couple of lines of small print need to appear on the back of Edy cards, just as railway by-laws mean certain terms and conditions should be on the reverse side of those cards, making combining them legally difficult.

Shigeyuki Kawai, president and chief executive officer of bitWallet Inc., said that standardisation and business expansion go hand-in-hand in the digital ID business because standardisation will attract more companies to take up the technology and drive down costs. With this in mind the future of Edy seems set for greater success.

To date around 200,000 Edy cards have been issued. At least one quarter of these double as corporate ID cards for Sony, Bank of Tokyo Mitsubishi and Sanden workers while around half have been bundled with Sony's Vaio W desktop personal computer. There are currently 100 stores using the edy system in Japan and they handle an avaerage of 1,000 Edy transactions per month. However, now that AM/PM has started accepting the cards, Biwallet is confident their system will see around a 100% increase in transaction volume. To contiune this succes BitWallet now plans to deploy Edy with other retail chains. "We have spoken with many big stores, coffee chains, drug store chains and parking operators," said Mr Miyazawa "We have contacted maybe more than 400 companies. At this moment I cannot speak officially but many stores and chains have agreed to join Edy." In addition to going after large retail chains, BitWallet is also looking to court independent retailers in single locations to create Edy hot spots where a large number of retailers accept the card.

As the Edy success story snowballs we have to ask the question - will small change soon be redundant in Japan?. Will the Edy system migrate to other countries? Are we actually looking at the start of the future for micropayments? We will have to wait and see!