September 2004

Volume 13 • Number 9

Smart Card News

Smart Cards, SIM, Biometrics and RFID

www.smartcardgroup.com

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CreditCall

The front page of this website is kept very simple using a framed screen with a graphical navigation bar and a sign up box for their mailing list. CreditCalls products include EMV payment solutions, parking, ticketing vending machines and payment over IP solutions. Once into the belly of the website, you can get access to information about these products, case studies and download a trial version of their EmvX Toolkit. The website itself is predominantly text based with very little graphical content but navigation is easy to use and the website is kept very user friendly.

Navigation	■■■□□
Content	■■■□□
Appearance	■■■□□

www.creditcall.com

Chip and PIN

The official UK chip and PIN website is broken down into three sections, Consumers, Business and Organisations, and Media. As a consumer you can get access to facts about chip and PIN, and get the answers to some the most frequently asked questions. As a Business you can get access to hardware supplies and trade associations. In the media section you can download photos, press packs and training information videos. The website itself has a very simple navigation bar making it easy to access the relevant information. The content of the site like Credit-Call's is mainly text based but the information is relevant and to the point. The site appearance is simple using a white background and shade of blue for the navigational bar and text.

Navigation	■■■■□
Content	■■■■□
Appearance	■■■□□

www.chipandpin.co.uk

Semiconductor Industry Association

The front page of this website is visually unattractive with the top navigational bar and banner far to big for the site. However apart from this inefficient use of space the navigation bar is easy to use. Once you hover the mouse over the almost vertical sections, the site presents another more focused bar underneath, each a different colour to the next. The front page also presents a highlights section and some quick links. Once in the site there is a vast source of information at your fingertips from press releases, presentational material, annual reports, membership listing, current SIA issues and a very useful company directory. The whole site is text based and the navigational bar is quick and easy to use. The sites appearance, like the other sites looked at in this issue, is plain with just a white background and coloured text.

Navigation	■■■■□
Content	■■■■□
Appearance	■■■□□

www.sia-online.org

The Great Wall of China Goes Contactless

The Beijing Municipal Administration and Communications Card Co. Ltd.(BMAC) will be using Philips' MIFARE UltraLight contactless chip technology in a new e-ticketing system for the Great Wall of China at Badaling, Beijing. This new contactless Smart Card system will replaced the existing magnetic access-card currently used at this popular tourist destination. The e-ticketing system will be compatible with Beijing's existing One-Card ticketing system, which will be used at the 2008 Olympics and will also support Beijing Public Transportation mass transit cards based on Philips' MIFARE contactless chip technology.

Each year more than 4 million people from around the world visit the Great Wall of China. The landmark's new contactless system will streamline access by reducing ticket jams, fraud and system maintenance costs. The system will enhance the information management system of tourism spots in China, enabling a real-time management of tourist flows and will provide support for bundling transportation and accommodation. The contactless system is rugged making it ideal of outdoor use, and is designed to withstand the hot and cold weather extremes as well as other severe weather conditions such as blowing sand encountered at the Great Wall.

Visitors will obtain access to the Great Wall of China by using the new Smart Cards as tokens and later the Beijing One-Card, eliminating the need for cash payments while tourist bureaus also benefit from the improved statistical collection. Contactless systems are planned to be installed at other tourist attractions, including other renowned tourist spots in Beijing and elsewhere in China.

"Contactless access at the Great Wall of China will serve as an important case study for implementation of other venues and events around China, most notably the Olympics," said Derrick Robinson, senior research analyst, IMS Research.

"The e-ticketing system at Badaling Great Wall creates a new spending pattern, introducing an innovative purchasing concept when compared to the traditional entry ticket buying method. We selected Philips' MIFARE Ultra Light technology for its convenience, reliability and ability to be quickly integrated into installed ticketing systems due to compatibility with Beijing's existing e-ticketing system as well as other mass transit systems throughout the country," said the Project Head of BMAC. "During a trial run at the Great Wall of China from March to July 2004, the system demonstrated excellent, reliable performance."

"To date, more than 100 million MIFARE IC-based cards have been distributed in China," said Tony Lear, senior vice president and general manager of Philips Semiconductors China. "The implementation of Philips' MIFARE Ultra Light contactless technology at the Great Wall of China showcases the extension of the technology beyond initial transport applications and demonstrates the benefits it can bring to other facets of the connected consumer lifestyle."

Lead Story

2

Biometric Access at the Olympics

During this year's Olympic Games in Athens, Bundesdruckerei GmbH and NEC Deutschland GmbH supplylied the German House with a biometric accreditation system. Set up by the German National Olympic Committee, the German House was the central meeting place for sportspeople, officials, business partners and media representatives during the Games. The customer, Deutsche Sport Marketing GmbH (DSM), expects a total of 4,500 accreditations during the period of August 12th and August 28th. The accredited people were the Olympic athletes, media representatives, officials and staff. On registering, accredited visitors received a biometric ID card giving them access to the German House using their fingerprint data

New Health Insurance Smart Card

SCM Microsystems, Inc provided the Smart Card readers for the European Union NETC@RDS pilot in Greece that kicked off with the start of the summer Olympics. The pilot is the next step in the EU NETC@RDS project that aims to speed the cross-border verification of healthcare benefit eligibility and claims processing for EU citizens between participating member states. The health insurance Smart Card provides electronic evidence of benefit entitlement for the insured person, automates the entry of personal and entitlement information, and establishes an electronic basis for further billing and clearing processes

CEMEA Smart Card Increase

According to Visa International all countries in Central Europe, the Middle East and Africa (CEMEA) region will use Smart Card technology by 2006. The rapid evolution of Smart Card technology in payment transactions is starting to convert the CEMEA region, which is a cash-dominated area, into a more card-dominated environment.

This migration to Chip based card payments has been boosted by an estimated investment fund of $ 36 million to help the countries within the CEMEA region transfer their process to chip technology. To date the CEMEA region has issued 3 million chip cards and estimates show that by the end of 2004 this number will reach around 6.9 million out of a total of 60 million.

SA to Get new ID Scheme by 2005

The Home Affairs office in South Africa are planning to issue a national identity card scheme by the end of the year, which will replace the old Green Book system. The new cards will contain the holder's photograph, identity number, fingerprints and address. Home Affairs director general Barry Gilder has stated that this new Smart Card scheme for ID was part of a bigger Home Affairs National Identification System (Hanis), which aimed to electronically capture the fingerprints of all South Africans. The aim will be to distribute six million ID cards a year.

Access Control Market Report 2004

Research and Markets have reported that growth in the access control market was slow in 2002 and 2003. They estimate that the value of the market at end-user prices was £226m for 2002, rising to £232m in 2003. Several manufacturers reported better growth in exports than in the UK market in 2002. At the same time, some customers are choosing Smart Card systems to future-proof the system, as they believe that they will add other kinds of information to the system at a later date. Proximity technology continues to show growth but is thought to be fast approaching its peak. Competition is coming from Smart Cards and hands-free systems. They expect the market to show annual growth running at between 3% and 4% from 2004 to 2008, in terms of constant 2003 prices.

Chips to Grow by 28%

The Semiconductor Industry Association (SIA) has forecasted the worldwide sales of chips to grow 28.6% in 2004 followed by a more modest growth of 4.2% in 2005. SIA is projecting a compound annual growth rate of 10.4% for the industry through 2007. More than half of the demand is with state-of-the-art chip foundries making larger silicon wafers of about 300 millimeters in diameter.

Dutch Kick off with Smart Cards

In January, Bell ID made an agreement with the Royal Dutch Football Association for the provision of ANDiS Management Systems for web-based management and local personalisation of Smart Card season tickets and membership cards called (S)CCs.

Roda JC, together with FC Dordrecht, was the first football club to connect to the system; Vitesse is now one of 9 subsequent clubs using the (S)CCs system and can print and encode multi-application Smart Cards locally at the registration office in their own stadium.

SCM Teams with Sharp

SC Microsystems, Inc (SCM) has entered into a cooperative agreement with the Integrated Circuit Group of Sharp Corporation for the development, sales and marketing of contactless Smart Card readers. Under the agreement, SCM will further develop its contactless reader/writers to be compatible and interoperable

The Smart Card Market Shows Growth

New analysis from Frost & Sullivan has revealed that unit shipments in the total Smart Card industry totalled 2.02 billion cards in 2003 and are projected to reach 3.11 billion cards by 2008. The report states that a number of Smart Card segments have a strong potential for growth, noting that the area with the most potential was contactless technology.

However they also state that for contactless technology to move forward, interoperability must be achieved, as in the case of contact cards where the standards are clearly defined at every level. The report also goes on to say Europay, MasterCard, Visa (EMV) migration in many parts of Asia-Pacific (APAC), Latin America, Brazil, and parts of Mexico is also expected to boost the uptake of Smart Cards.

SAFLINK and SSP-Litronic Merge

Stockholders of SAFLINK Corporation and SSP Solutions have approved the merger of SAFLINK Corporation and SSP-Litronic. Under the terms of the merger agreement, first announced on March 22, 2004, stockholders of SSP-Litronic will receive 0.6 shares of common stock of SAFLINK Corporation for each share of common stock of SSP-Litronic they hold.

JCB Launch Wacoal I-Card in Taiwan

JCB has launched the Wacoal I-Card in cooperation with E. Sun Bank and Taiwan Wacoal Corp, a major Japanese apparel company.

The Wacoal Smart Cards issued by E. Sun Bank provide credit payment functions through JCB's EMV-compliant application J/Smart on Java Card platform. The card is the first to carry Taiwan's National Credit Card Center's own chip-based loyalty program. The loyalty program lets cardmembers earn points at more than 200 Wacoal merchants throughout Taiwan.

ACI Aids EMV Migration

MBU Ltd, a financial services provider in Croatia, has licensed key components of the ACI Commerce Framework to support its growing card operations business and enable the company to meet forthcoming EMV mandates. These components include ACI's BASE24 software, the ACI Card Management System and ACI Smart Chip Manager. This payments platform will aim to provide transaction processing, authorisation and clearing for national and international bankcards including Visa, MasterCard and American Express. Deployment is underway and is expected to be completed by December 2004.

Additional CAC's for DOD

Axalto has received an order for 800,000 additional Department of Defense (DoD) Common Access Cards (CAC) from EDS, a General Services Administration (GSA) Smart Card prime contractor for the program. The CAC enables physical identification for building access and logical access for secure logon, secure emails and privilege-based access to secure networks and databases. As of today, the CAC program is rolled out in over 900 DoD locations worldwide, serving as the standard ID card for government staff.

The U.S. federal government also plans to issue new smart ID cards in numerous other federal agencies, including Defense, State, GSA, Treasury, Homeland Security, Veterans Affairs and NASA.
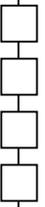
For more information visit ...
💻
Visa International
www.visa.com
Semiconductor Industry Association
www.sia-online.org
Axalto
www.axalto.com

Logica and Airbus Reach New Heights

LogicaCMG has announced a new Radio Frequency Identification (RFID) collaboration with Airbus. LogicaCMG will be collaborating with Airbus on a fully integrated RFID solution for wireless tracking and tracing of spare parts, tools and instruments that enables Airbus to generate significant cost savings and improve security.

RFID for Pharmaceutical Industry

Potential cost savings from the use of RFID will spur increasing use of the technology within pharmaceutical company supply chains during the next 18 months, according to research by META Group. Because of the high value of pharmaceutical products, the cost barrier for tagging products within the supply chain is relatively low. In addition, the Food and Drug Administration (FDA) has acknowledged the benefits of a universal electronic pedigree, which will identify and track individual pharmaceutical products throughout the supply chain.

Govt of Malta Selects Bioscrypt

Advanced Industrial Systems (AIS) has combined Bioscrypt's V-Station biometric finger scan reader with other access control and security management systems to provide the Maltese government with a technologically advanced solution.

INTER Installs ID Access Control

INTER Insurance Group has installed a personal identification and time management system from Kaba GmbH, using LEGIC's multifunctional contactless Smart Card technology. These include secure ID, access control and time & attendance management all operated via a single contactless Smart Card platform. LEGIC were brought into the project to supply their contactless Smart Card technology, and an internal company ID card was designed to incorporate a LEGIC RFID 'proximity' chip.

New Dual Interface Microcontroller

Atmel Corporation has introduced the new AT90SC12872RCFT dual interface secure microcontroller specifically tailored to efficiently serve the electronic identity markets.

The AT90SC12872RCFT complies with the new International Civil Aviation Organization (ICAO) specifications for e-passports.

New Solution for ePassports

STMicroelectronics has developed a dual-interface (contact and contactless) secure IC. The ST19WR66 offers 66-Kbytes of EEPROM, enabling the product to store biometric records and personal information, as required by today's International Civil Aviation Organization (ICAO) program. The company's non-volatile memory technology allows ST to supply highly reliable EEPROM that retains data for more than 10 years, which is perfect for passport-type application lifecycles.

Smarter Reg for Indian Vehicles

The Department of Transport in India has announced that a new Smart Card scheme is being introduced to streamline the entry of commercial vehicles transporting goods across neighbouring states as well as making transactions at the border easier. Instead of the old paper system India employed for registration of cars, now new vehicles will be issued with an optical Smart Card containing every small detail about the vehicle - from its ownership to change of address to hypothecation records.

3 Million Fingerprint Sensors

AuthenTec, Inc. has shipped its three millionth biometric sensor - a record in the industry. The company reached the milestone through continued rapid growth, shipping more than one million of its patented TruePrint technology based sensors in the past five months alone.

India's First EMV Credit Card

The MULTOS Smart Card operating system claims its first EMV Smart Card issuer in India. MasterCard and ABN AMRO Bank have joined forces in launching the first EMV-compliant M/Chip smart credit card in the country, the ABN AMRO Bank MasterCard Gold Card. It is the first smart credit card in the SAMEA region to run on the MULTOS platform. For the first time ever the card offers a unique 'Smart Miles' Program to cardholders, enabling them to earn 'air miles'

World News in Brief

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Mc Cashless

McDonald's in the US now accepts MasterCard Pay-Pass, a new contactless payment option utilising radio frequency technology at selected McDonald's restaurants in the U.S. Participating McDonald's restaurants in Dallas and the New York metropolitan area will implement MasterCard PayPass later this year, with additional locations to be added in 2005.

OTI/Atmel Solution gets Certifed

Atmel Corporation and On Track Innovations Ltd have received the first commercial quantity orders of contactless microprocessors developed for the MasterCard PayPass contactless payment program. Atmel and OTI were selected to supply the secure contactless micro controllers in addition to an overall contactless solution that includes the operating system, application support and inlay technology for contactless Smart Cards.

Esso Renews Contract with ACT

The largest Smart Card based loyalty scheme in Ireland being used by over 250,000 Esso 'TigerMiles' customers has been renewed with prime contractor Fujitsu Services and Applied Card Technologies (ACT). ACT has been subcontracted by Fujitsu Services to develop the software applications behind the Smart Card driven solution based on three core technology requirements: terminals, back office and Smart Card based applications.

Liverpool Seeks Transport Smart Card

The Merseyside Passenger Transport Executive of Liverpool, UK, have put up for tender the design, supply and issuance of smart-enabled tickets. They want a company to design, produce and supply security printed travel passes for elderly and disabled concessionaires with a 'chip-label' or 'inlay' addition. The estimated volume of Smart Cards is expected to be in the region of 200 000 - 250 000 leading to a greater figure of 500 000 within the contract period of 4 years.

Samsung to use Philips NFC Chips

Samsung Electronics has made plans to buy Near Field Communication (NFC) chips which use a radio frequency identification (RFID) technology from Royal Philips Electronics.

This contactless Smart Card technology will be used in Samsungs Mobile phones so that they can be used as electronic wallets. These chips will allow the phone to conduct secure payment transactions, gain access to public transportation, building access and store digital rights.

It is predicted by some analysts that half of the world's mobile phones will have an NFC chip by 2009.

Doors Open To Fortress Smart Card

Madejski Stadium, the home of Reading Football Club, UK, is the latest venue to join the Smart FC Scheme from Fortress, following hot on the heels of Manchester City FC and Liverpool FC.

Fortress contactless card readers have been fitted at all of the Madejski's turnstiles. To enter the stadium, all fans, whether at home or away, simply hold their Smart Card or smart-ticket over the reader.

New Biodegradable Smart Card

Sony Corp and Mitsubishi Plastics Inc have developed a contactless Smart Card made from plant-derived plastic instead of the typical oil-based plastics that do not decompose. The Smart Card material itself is made from polylactic acid mixed with special additives.

This new Biodegradable card is said to be the first of its kind but due to financial constraints time-frames for the production of these cards is still an ongoing issue.

World News in Brief

The Upsurge in Contactless Payment Applications

**By Patsy Everett, Managing Director, Smart Card News Ltd**

Patys Everett

Just recently contactless cards have come into their own. They have always been the cards of choice for transport but the last few years has seen a plethora of contacless payment schemes. MasterCard first trialed their Paypass in December 2002 being targeted at fast transactions costing less than $25, ideally fast food outlets, petrol stations, road tolls, mass transit and vending machines. The Paypass card transmits the same data that is contained on track 2 of the magnetic stripe, the data that is used to route and process transactions within the processing networks, from the card to the reader and, like Visa, uses contactless technology based on the ISO 14443 standard.

The big success story for MasterCard this summer was the announcement that the McDonalds chain in Dallas and New York would be rolling out Smart Card readers in their restaurants later this year. MasterCard are also hoping to launch Paypass in Canada within the next 18 months, once the technology has taken hold in North America.ExpressPay is the American Express offering on a keyring. ExpressPay can be linked to an existing credit or debit card and entitles the cardholder to the same loyalty benefits. The holder can pre-pay using a MasterCard, Visa or Discover card and have their purchases deducted from the pre-paid amount. There are limits as to how much can be spent each day but any fraudulent transactions are covered. The American Express Blue Card is now equipped to function in a similar fashion but only currently available in Phoenix Arizona in the USA. Not to be left out Visa recently launched their Visa Wave product in Malaysia, similar in concept the card conforms to interoperable standards, is fully EMV compatible and can be used at conventional EMV contact readers in contact mode. The Visa Wave card is a "Combi" chip card so has both contactless and contact interfaces.

NTT DoCoMo, JCB and AEON recently announced their new contactless payment solution, QUICPAY using the NTT DoCoMo Smart Card handset, which is capable of using the I-mode Felica mobile wallet service. Also using Sony's Felica IC chip is Casio along with JCB, to develop a wristwatch capable of making payments and functioning as an ID card as well as telling the time. JCB launched their e-METI Business Card earlier this year which is based on dual interface technology and not only acts as an international credit card but allows government employees to pay for goods at canteens thoughout government agency facilities. Dai Nippon and Matsushita jointly developed the technology. The card incorporates JCB's Dualplus interface that complies with ISO/IEC 14443 type B standards.

These are just a few of the many contactless payment applications currently underway, why all this activity? As we know handling cash is expensive and the banks would like to get rid of it. Retailers would like to get rid of cash, it's heavy, suffers from shrinkage and is filthy. Electronic transactions work and the public generally has faith in the organisations that issue and run the schemes. I have no problem in imaging a world without cash (and I am in the older age group) so the up and coming generation who rarely get to use cash will probably embrace novel ways of paying for goods. Contacless transactions are considerably faster than contact, hence their use in mass transport but can we be sure the transaction is secure? And the information stored in the chip- who knows what data is stored about the card holder.

The technology is fascinating and pushing the bounds but is it what the consumer wants, is it a technology that is being forced on an unsuspecting public? Do mobile operators want to take the place of banks for these small value payments?Do we expect that the major payment organisations such as Visa and MasterCard will move EMV to a contactless only Smart Card?
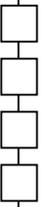
Evolving Technologies Change the Dynamics of the Smart Card Market

By Frost & Sullivan

FROST & SULLIVAN

In Frost & Sullivan's World Smart Card Markets, it is revealed that unit shipments in the total Smart Card industry totaled 2.02 billion cards in 2003 and are projected to reach 3.11 billion cards by 2008. Frost says the Smart Card market is finding acceptance across a range of applications. "A number of Smart Card segments seem to offer immense potential for growth," notes Frost & Sullivan Research Analyst Karthik Nagarajan. "Most notable of these is contactless technology, which has been fairly successful in applications such as banking, transport, and security."

However, future expansion is likely to be threatened by the multiplicity of protocols. If contactless technology is to move forward, interoperability must be achieved, as in the case of contact cards where the standards are clearly defined at every level. Europay, MasterCard, Visa (EMV) migration in many parts of Asia-Pacific (APAC), Latin America, Brazil, and parts of Mexico is also expected to boost the uptake of Smart Cards. However, in North America, chip based banking cards are only used as a 'product differentiation' measure.

To make headway in these regions, banks and card associations are now trying to provide customers with alternative value additions. The absence of threatening fraud rates in North America has made it rather unnecessary for banks to opt for chip cards. Security concerns however, have been evident in the enterprise security market. With many companies in North America and Europe having identified Smart Cards as the ideal platform for the integration of physical and logical authentication, they have become increasingly popular.

"Even while the efficacy of these projects cannot be denied, the application and infrastructure costs are likely to prove prohibitive, especially for smaller enterprises," observes Nagarajan. "Unlike banking, security applications involve micro-controller cards with higher memory capacity and higher procurement costs."

Smart Card adoption is also likely to receive a boost from the growing demand for government IDs, especially in APAC and North America. The drive includes National ID schemes, driving license, and government employee ID and health cards. The success of projects such as MyKad in Malaysia, SMARTICS in Hong Kong, Taiwan Health Card, and the US Department of Defense's Common Access Card project are likely to help in expanding the market. Further, developments like the South Korean government's decision to change all public official ID cards by 2005, promise high growth for this market in the future. The growing popularity of high-end SIM cards is also likely to positively impact the Smart Card market. Many vendors have expanded their product lines to include high-end cards, which has enabled them to move into newer telecom applications and counter the price decline.

"Higher end SIMs are also likely to receive a boost from the continuing migration of time division multiple access (TDMA) to global system for mobile communications (GSM)," notes Nagarajan. "Growing competition among different operators is likely to make the accommodation of advanced data and voice services increasingly important." The report critically evaluates the performance of leading participants by unit shipments in two major Smart Card segments - memory and micro controller cards.

Industry Insight

National ID Program in the Sultanate of Oman

By Gemplus International S.A.

The Sultanate of Oman's national ID card program is the first Smart Card-based citizen ID solution ever to be deployed in the Middle East, making it a landmark project of its kind. The issuance of Royal Decree n° 66/99 has established the constitution of a new Civil Status Register and the creation of an Electronic ID card.

The Royal Oman Police (ROP), which is the local Omani authority managing the project, made a decision to launch a Smart Card-based ID program, not only to enhance the country's identification processes, but also to improve its IT infrastructure. Main objectives of the program were to Modernise the National Registry System, simplify and speed up administrative processe, provide better qualitative public services to Omani citizens and residents, pave the way to e-Government services and strengthen citizens' identification security. The ROP's objective was to build a state of the art solution and to offer best-of-breed services to the citizens and residents of Oman. After a strict and professional bid tender selection process managed by the ROP, in October of 2002, Gemplus was awarded the contract to deliver the first Smart Card identity solution ever to be deployed in the Middle East.

The contract appointed Gemplus to provide an integrated turnkey solution comprising of hardware, software and Smart Cards as well as training and skill transfer services to the ROP staff. Over the next five years ROP will issue approximately 1,5 million Gemplus smart identification cards to Oman's citizens and expatriates above the age of 15.

In order to achieve its ID program objectives, Oman chose to capitalise on the security and convenience advantages enabled by smart chip card technology. Smart Cards provides the ideal means to store and manage identity credentialsthey provide High levels of security with unrivalled storage capabilities, interactive technology with the ability to update, delete, add and compute data, they enable on-line/off-line authentication and digital signatures and bridge physical and digital worlds as the same card can be used for identification in both on- and offline mode, they are a convenient form-factor capable of handling visual security printed features with high durability of ID card and Multi-application and post-issuance capabilities

One of the biggest challenges in the project was to build a National Registry System (NRS). NRS is the central population database that allows the country to build a record with data collected from different databases where data is stored per category, e.g. pictures, fingerprints, demographics etc. Previously Oman did not have such a population registry service in place. Through the new National Registration System (NRS) authorities can now register details for each Omani and foreign resident (i.e. births, marriages, divorces and deaths), in a single centralised system. Data is collected in real-time in regional offices (12 initially) where each citizen can receive his/her ID card within just half an hour. The creation of NRS is an integral part of Oman's ID program, and will act as the pillar of the country's future e-government initiatives. Based on the NRS, the country's regional enrollment and issuance centers possess the components to operate registrations/enrolment operations, civil events certification issuance and Smart Card personalisation and issuance

The multi-purpose cards are fitted with a biometrics-based ID system for enhanced security and contain all the holder's particulars: name, address, fingerprints etc. Cardholders are able to use their smart ID card in order to visually and electronically identify themselves at various authorities all over the country and through mobile terminals carried by the members of the ROP. The ID card supports applications such as driving licenses, passports, PKI authentication & Digital signatures, E-Purses and Healthcare Cards Applications can easily be upgraded, removed or added onto the card over time, so called "post-issuance", giving the ID document a longer lifespan as it eliminates the need to issue a new card every time a citizen's personal information changes.

Getting the electronic ID card is quick and easy. The main steps involve, verification, registration and issuance, and takes place at the regional enrolment and issuance centers. First, the authenticity of an individual's identity documents is verified. When validated the data is entered into the NRS. After reviewing the entered information the applicant signs the registration documents.

Next the applicants picture and fingerprints are captured and stored on the card. The card is finally issued and given to the citizen/expatriate. Citizen ID card Expatriate ID card.In full compliance with the current worldwide trend, the Sultanate of Oman selected chip technology based on Java Card. By using Open Platform technology, the ID cards become more versatile in terms of functionality, as it allows several applications to reside on the very same card.

When implementing any nationwide ID program, there are multiple factors that need to be taken into consideration in order to achieve successful deployment that matches the customer's expectations. In the case of Oman, some of the key success factors were local presence, strong project Management & Organisation, coordination of team & sub contractors, control customer requests within project scope, cross team efforts with the customer, skills transfer and full control of the end-to-end solutionThe ROP pursued an aggressive time plan that aimed for issuance of the first smart ID card beginning of 2004, with nationwide roll-out in the summer. According to schedule, the first card was issued to His Majesty the Sultan Qaboos bin Said himself on the 3rd January 2004.

Sultan Qaboos bin Said

On the Move

ASSA ABLOY's New US HQ

The ASSA ABLOY Global Technologies Division (GTD) has announced the establishment of the company's worldwide headquarters in Providence, Rhode Island, U.S.A. The GTD personnel to be located in the new facility include Joe Grillo, ASSA ABLOY EVP and president and CEO of GTD; Karen Fournier, executive assistant to Mr. Grillo; Steve Finney, GTD controller; and Brent Archer, newly appointed GTD vice president of operations.

New President At First Data

Debra A. Janssen has joined First Data Debit Services as president reporting to Ronald V. Congemi, CEO. Janssen, with 20 years of payment industry leadership experience, will manage processing activity. From 1998-2000 Janssen was president and CEO of eFunds Corporation, a subsidiary of Deluxe Corporation.

ActivCard's New Board Members

ActivCard Corp has appointments of John A. Gordon and Richard A. Kashnow to its Board of Directors. Gordon is a recently retired Air Force four-star general, he most recently served in the White House as the President's Homeland Security Advisor from June 2003 until June 2004 and as the Deputy National Security Advisor for Counter Terrorism and the National Director for Counter Terrorism from June 2002 to June 2003.

New CEO at Infineon

Dr. Wolfgang Ziebart took over as CEO of Infineon Technologies AG on September 1. Accordingly, Max Dietrich Kley, who held the position temporarily for the semiconductor manufacturer, will immediately reassume the role he left in the interim as Infineon Supervisory Board Chairman.

UK to Become Health Smart

By Jason Smith, Production Editor, Smart Card News Ltd

Jason Smith

For several years there has been a shift towards using Smart Card Technology for the Healthcare industry within the UK and throughout nothing has come to fruition. But it now looks as if there is light at the end of the tunnel. The UK National Health Service (NHS) is now looking into the prospect of developing a NHS Card which would contain personal information, such as NHS number and date of birth and allow patients better control over their personal health data.

The Aim of this Card will be to speed up confirmation of access to appropriate health care and support smart access to personal data. It will also allow patient's the ability to register with a GP quicker and control non-emergency treatment.

In a bid to improve the NHS the Department of Health plans to introduce this new idea on the back of its purposed introduction of the new European health insurance card throughout the UK. This new health insurance card aims to replace the current 'E-forms', in particular the E111, which is used by European citizens to prove their entitlement to free or reduced cost emergency medical treatment during temporary stays in other European countries. Under the Government proposals, the cards would not initially carry a photograph or any electronic or clinical data, although they would show the holder's name, date of birth and a personal identification number.

From 1 June 2004, 13 European countries have already begun introducing the European health insurance card. The remaining 16 countries, including the UK, are committed to introducing the new card by December 2005. An extra 18 months was granted to these countries as they did not have existing national health card systems which could be adapted to the new European model. The card will aim to cover the 25 European Union states plus Iceland, Liechtenstein, Norway and Switzerland.

The European card will be free of charge and valid for up to five years and can be applied for via telephone, internet, or email. The new card will be administered by the Prescription Pricing Authority who will be responsible for processing applications and distributing the cards. "The Government is committed to introducing the new European health card by the end of next year and ensuring that it will be easy to apply for and easier to use. Until 31 December 2005 UK citizens can continue to use E111 forms when they travel to any of the EU member states" said UK Health Minister John Hutton

In time the NHS card will eventually be amalgamated with the European health insurance card project. Thus the proposals for a new smart NHS card in England will be developed as part of the European Health Insurance Card. Mr Hutton confirmed this by saying, "Parallel to that we will be developing the NHS care" However it is concerning to learn that with the UK Home Secretary David Blunkett's purposed national identity card on the way for the UK, the officials preparing the new ID Smart Card where unaware of the UK's obligation to issue the European health insurance card by December 2005.

Finally after years of talk it looks as if the UK will finally get a Healthcard card, in some form or other allowing us to have better control over our medical records and making sceptics more concerned "Big Brother" is watching.

# The Whistleblower Exposes Transport Vunl-nerabilities

The Whistleblower

In the early days of the electronic purse the conversation was all about closed and open schemes. Long before the regulators ever got involved it was clear that the security issues between the two approaches are very different. The open scheme needs a transaction system that balances the risk exposure equitably between all the participants. Authority, Responsibility, and Liability has to be correctly assigned and enforced.

Today one can see ever more examples of scheme operators evolving their schemes from a closed to open architecture without modifying the underlying security platform. Typical of this are transport operators who originally devised a closed scheme for ticketing but are now extending this to use the same card for payments with various merchants in the same environment.

So what do we mean by an open scheme? The concept seems very obvious and we can cite the UK Treasury for an explanation of the European Directive for e-money. "e-money is defined as monetary value, as represented by a claim on the issuer, which is stored on an electronic device, issued on receipt of funds and is accepted as means of payment by undertakings other than the issuer"

Now although this is specifically for e-money the concept must be valid for any electronic representation of an asset. We can equally look at a transport scheme both in a closed and open architecture.

In the closed scheme it is obvious that the transport operator has the Authority, Responsibility, and Liability for the workings of the complete scheme. This includes not only the tickets (in smart card or whatever form) but the terminals and the underlying infrastructure. Subject to the terms and conditions of the ticket the operator has a contract with the consumer to provide the services purchased. No other legal entities are involved.
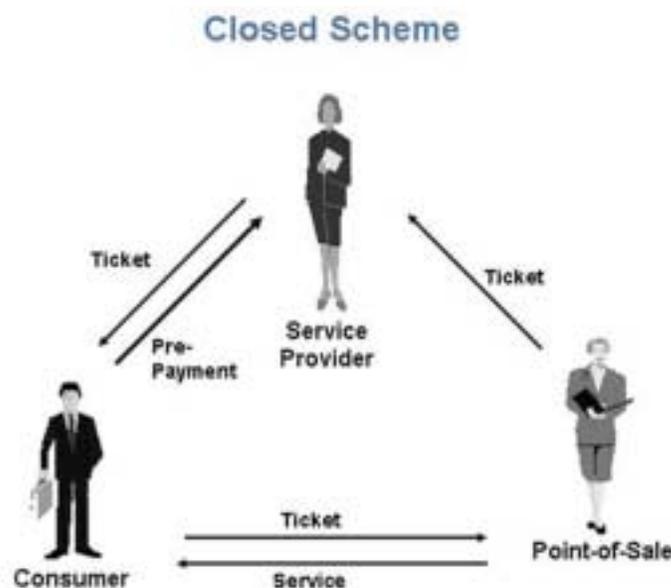
The open scheme is more complex in that a particular service provider may choose to allow tickets to be issued by another party. In the extension of this concept to payments a merchant may choose to accept a value liability against an issuer of pre-paid value. Now we are really concerned with what are the duties of the various parties, who is liable for what and how do we equitably reconcile the scheme's transactions?

Open Transaction Model
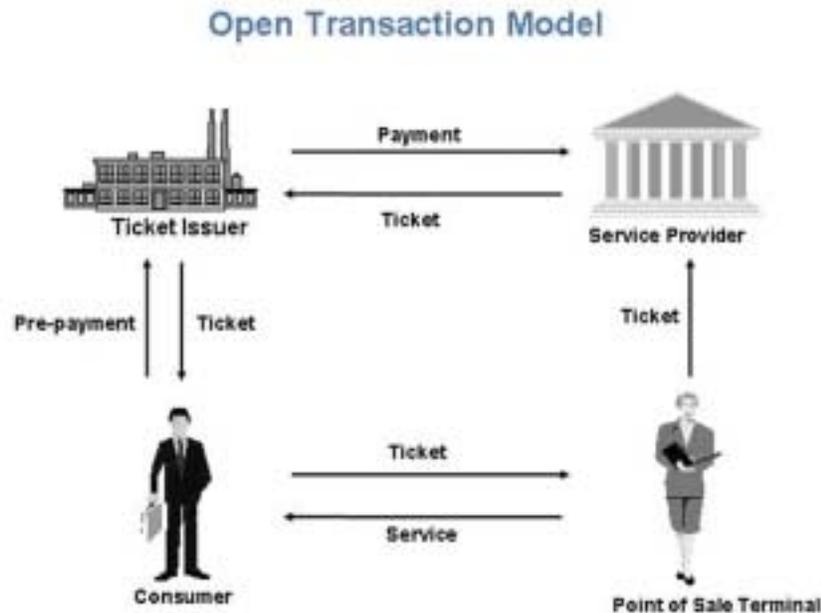
In these circumstances we need to create transactions representing the tickets sold and the services provided. This could be for the issuing of tickets or for the acceptance of some pre-paid value for a service (or goods). These transactions must provide the necessary assurance of the particular event.

The service provider wants to be paid for the services he provides. It would be naïve to assume that such a model can work on trust alone so the service provider must supply evidence to the issuer in order to seek re-imbursement.

In practice this can only be achieved by submitting cryptographically protected transactions. In the case of issuing a ticket the issuer would request the ticket from the service provider while in the case of pre-paid value the service provider would seek recompense on evidence of having provided the service. The model is abstract and in a practical realization the service provider might give the issuer some security token by which means the ticket can be created. However the transaction argument is unchanged.

Where the tickets are issued by the service provider on his card then the liability model remains the same as the closed system. When the tickets are issued by one service provider and are stored (and presented) on another entities card then the issuer is dependant on the security of that card and the process by which the tickets are created and stored on that card. The situation is even more obvious when you consider pre-paid value. What happens when the service provider requests payment for which the issuer has no allocated value (e.g. some fraud scenario)?

In all these open scheme scenarios it is readily apparent that the card needs to be actively involved in secure messaging to provide the necessary assurance to the parties concerned. This means that the memory smart cards often used for closed schemes are inappropriate because they don't provide the necessary security properties. The developers of such schemes assure me that the risks are minimal but even if that were true they are probably overlooking the confidence issue for both consumers and merchants.

When it comes to money nobody wants to lose out!

ActivCard Under the Spotlight

By Patsy Everett, Managing Director, Smart Card News Ltd.

Patsy Everett

If asked, ActivCard would describe themselves as global providers of strong authentication and digital identity solutions for secure remote access, single sign on and enterprise access cards. Formed in 1988 by Yves Audebert ActivCard now has 292 employees world-wide with a turnover of $38.3 million for 2003. Their headquarters are in Fremont, California and they have offices in Canada, Europe, South Africa and Australia, they also have a pretty prestigious client list such as the USA DoD, Airbus, Hewlett Packard, Lloyds TSB, and Renault just to name a few.

Smart Card News recently interviewed the newly appointed CEO Ben Barnes about his view of the future for ActivCard and his thoughts on biometrics. Ben comes from a strong marketing background having been instrumental in the raising of £34 million in private placement funding for Sagent Technologies, where he was President and CEO and prior to that, whilst general manager at IBM his division made more than $4 billion annually in sales across IBM.

Ben Barnes

All this bodes well for ActivCard. Ben's early impression of ActivCard is that in the past they had focused to heavily on their American federal government market and not enough on the financial services industry and other markets. Ben was keen to point out to me the company's new products that are geared to the financial market, in particular their anti-Phishing product, their USB key which acts as a multi-application dynamic Smart Card, and their tokens which replace passwords and the soft tokens which provide 2 factor authentication. When pressed for his thoughts on biometrics he pointed out that there were lots of other companies who had greater expertise than ActivCard in this area.

"Replacing Smart Cards with a biometric was not really viable" he said, "the technology was not really there yet, there were to many false negatives and positives. For instance if the only way to sign a user on in the morning was by fingerprint, you would be likely to have a real headache on your hands if the user could not log onto their system. A biometric combined with an international Smart Card would be a secure way of validating who you are".

When asked what he thought about a national ID card with a biometrics he said " I don't believe we will ever see a national ID card in the USA. I think that more and more states will issue driving licences with chips. Virginia and North Carolina are already looking in to this. The information stored on the card is debatable; it is possible they will store a biometrics on it. When you get a driving license in California you have a thumb print taken, but this is just put on file. They also put your picture, weight and height on the card so all those things can be stored as a credential. The States do not know what they want on the new driving license chip card, but what they have spoken about is if you want to donate your organs, so in the event of a fatal accident the police can take care of that".

"In the States there is still the debate about passports and if they should have chips on them and what does that mean. Do we still have a passport stamped or does it just become a Smart Card? I travel a lot and would be prepared to supply certain information to certain authorities if I had a passport/card that would rush me through the airport" he said. "So it depends on what information is collected, how it will be perceived to be used and by whom". As I pointed out to Ben there is a trial at the moment in the UK, by an insurance company, tracking car users journey by GPS so they can pay different monthly amounts depending on their journey. If the car driver use's a motorway rather than an A road they may save money as a motorway is deemed safer.

The insurance company could also suggest safer routes for regular journeys from the information collected, but the issue here is, for instance, if you regularly drive in the early hours of the morning and you are under 25 years could this be interpreted as returning from a night club, possibly under the influence! Would this information be passed to another body?

When asked about the future Ben thought there would not be a market for readers as we know them now, they will be in-built, " Dell are able to put readers into their equipment for $2 and I don't believe readers are a good business" he said. "Maybe in time you will only have to wave your card at the PC instead of putting it in the PC or even having the chips embedded in clothing, for example your tie or implanted in your body at birth".

Marc Hudavert, VP and General Manger at ActivCard had a different view. He is interested in the enterprise market. "I would say the ideal scenario would be any kind of credentials, physical or logical access, payments in the canteen, social security numbers, HR data would be managed on one device or chip in a handset, mobile phone, Smart Card format or something that would allow employees to gain access to buildings, get connected to the network, give the correct data to HR people in case of an accident, all of these credentials could be managed on one card which will lower the cost".

Marc Hudavert

"As far as government is concerned I don't believe that we will have one single card mixing banking, ID, healthcare etc. as each administration will want to own and manage its own application. If paying for your parking with your mobile phone who will do the branding? In theory your one time password could be your phone". Marc believes that in the future ActivCard will be in the consumer market where as today they are basically in the financial/business services sector. "If you look at VPN's, in 10 years they have enabled people to work from home, this is a new trend, so in 10 years time, who knows". He said.

TV Viewers Vote with their Cards

By Nick McGarvey, Managing Director, CreditCall

It seems that not only are we a nation of couch potatoes, but we are also paying more than ever for the privilege. TV companies now make more from us paying to watch their channels on Sky, digital and cable, than they do from their advertisers. According to a report published this August by Ofcom, the industry regulator, the amount we spend on pay per view TV has overtaken traditional advertising revenue for the first time. Last year revenue from paid-for TV services totalled £3.3bn, whereas advertising revenue amounted to just less, at £3.2bn. We are all too eager to part with our cash for those 41 hours a week we spend glued to the box.

Nick McGarvey

This does not surprise me. The variety of sky, digital and cable packages on offer, with the hundreds of channels available, now give us such a variety of programmes that every taste and interest is catered for through the TV. From obscure sports to science fiction, every taste has a channel available for viewers to subscribe to. Five years ago there were 56 channels available to us through the various packages available. That figure now stands at over 270 channels, and it will continue to grow. We are signing up to combinations of channels which offer us constant entertainment to suit our needs. We no longer have to wait for Friday night to watch our favourite specialist show - it's on all day every day on Sky.

However, signing up to our favourite programmes means we end up paying for a lot we do not want as well. Inevitably we have to sign up for packages of channels, rather than be given the flexibility to have what we want when we want it. But this is soon to change. Advances in technology are enabling digital set top boxes to take card payments and activate channels for set periods of time, allowing us to pay on demand instead of being billed for groups of channels. Cashless payment technology is beginning to change the way we pay for TV, and it will be huge.

Later this year the pay per view TV market will change dramatically as secure card payment through digital set top boxes will be made available to us all, and pay on demand TV will offer viewers programmes, channels and services without the need for bills or subscriptions. The set top box payment system will allow us to buy programmes, channels and services using our credit or debit cards, directly from an on-screen menu from their satellite, cable or broadband set top decoder box. Our favourite programmes will be available without the need for a subscription, and we will easily be able to purchase what we want for as long as we want it. There is huge demand for pay on demand TV.

From research carried out by CreditCall, two key findings have been identified. Firstly, digital terrestrial (i.e. Freeview) set top box owners who do not pay ongoing bills and have a set number of channels would, if given the option, pay extra for channels, movies or shows if it was possible to do so. Secondly, ongoing sky or cable subscribers would prefer not to pay for large groups of channels all year round - only a select few and only when they want to watch something specific. People just want to watch their favourite channels when it suits them, and not be forced to pay large monthly bills.

An example would be a tennis fan who wants to watch Wimbledon, but would not want to subscribe to the entire sports TV package all year round. It would be far too costly, and they would be subscribing to a lot of other sports which they would never watch. Their subscription fee would be lining the pockets of the organisers of the myriad sports that are aired. Instead they would prefer to have the option to watch the channels when they know that tennis is being played, and pay for it as they want it. Through a card payment using the remote control, any channel could be accessed without the need for monthly or annual subscriptions. Pay on demand TV will work using an active payment system which will securely process payments from our cards. We will be able to operate the payment system through the TV screen and remote control using an intuitive on-screen interface. A reverse communications channel provided on most set top boxes will allow the set top box to talk to the payment host, switching on the channels or programmes as we pay for them.

This will open up limitless possibilities for the next generation of home entertainment digital media centres. Whereas the initial applications will be the direct payment of viewing subscriptions, in the long term instant payment for home shopping and charity donations will become commonplace, which will further impact revenue streams for transaction-based stations and programmes.

I have always contended that people will pay more for a product or service at the time they need it the most. From a phone call, to a soft drink, people will always pay a premium for something they actually want at the time they want it the most. This is why pay on demand TV will be so successful. People do not want to pay large monthly bills just to watch TV, when they could have the flexibility to do it differently. Consumers will be able to watch the channels which they would normally consider too expensive to subscribe to all year round, and the media industry will be able to tap into a new market of frugal TV viewers who want more viewing options without the large bills.

What will this mean for the media industry? We should see a marked improvement in programming standards as channels battle harder to win new viewers. The poorer channels will struggle to survive as the market moves further along the pay on demand model. The TV channels with the best shows will flourish, as people pay a premium to watch them, rather than subsidising the types of channels which constantly run poor shows. Some channels will disappear altogether, but it will only be in response to viewers voting with their cards.

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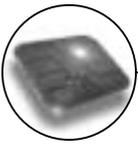
Consumers Are Not Ready For Chip & PIN

By Alastair Charatan, Chip & PIN Consultant, PA Consulting Group

The technology roll-out of Chip & PIN is gathering pace. However, with the liability shift now just under 6 months away, PA Consulting Group's latest survey reveals worrying signs that consumers are not ready for Chip & PIN. If action is not taken, it will have a serious impact for card issuers and merchant acquirers.

While there are some positive findings from this survey, it appears that insufficient co-ordination of the Chip & PIN programme is causing confusion among consumers. This means that the huge investment by card issuers, including card replacement programmes and funding the PMO organisation and communications campaign, is not achieving optimal return. The recent high-profile advertising campaign focused predominantly on the security of PIN and so consumers remain unclear on many aspects on Chip & PIN roll-out. The key findings of PA's survey of 500 consumers are that:

The survey revealed that only one third of people (35%) knew the PIN number for all their cards - with consumers often only recalling the PIN numbers of cards that they use to withdraw cash. This was a particular issue for credit cards where the habit of avoiding incurring high interest rates and charges on cash withdrawals means that consumers have simply destroyed PIN numbers on receipt.

❑ Consumers do not know which of their cards are Chip & PIN enabled. One quarter (24%) of respondents did not know whether their credit cards were enabled.

❑ Consumers are not getting the opportunity to use their PIN. One year on from the pilots 65% have never been asked for a PIN and only 5% have been asked for their PIN more than 5 times.

Despite the recent advertising campaign, consumers are still not convinced of the value of Chip & PIN. The survey found a 93% unprompted awareness rate for the term Chip & PIN. However, when questioned about when Chip & PIN takes effect, only 15% answered correctly and the qualitative answers highlighted confusion. Not all consumers believe Chip & PIN will provide greater security.

While safety has been key to the consumer messages embodied in the Chip & PIN programme's 'safety in numbers' strapline, this survey revealed mixed views. Those who had experience of using PIN on the continent saw it positively, but others expressed concerns that Chip & PIN could actually reduce security. If thieves managed to get hold of individuals' PIN they would be able to use your card in retailers unchallenged. The lack of perceived privacy when entering details into the PIN pad was also cited as an issue.

Consumers are not actively planning to improve their ability to use PIN:

❑ Apathy around changing PINs - The majority (55%) of consumers in our survey said that they would find it difficult to remember their PINs without changing them to one or two familiar numbers, and yet only 30% of those who have been issued with Chip & PIN enabled cards have changed their number. Our survey found that the difficulty in remembering PINs for different cards is likely to lead to consumers rationalising their card use, with one or two dominant cards being used for retail purchases.

❑ Consumers have experienced difficulty changing PINs: Of those who changed their PIN numbers 40% had found it either inconvenient or difficult. Of these individuals the problems included individuals not being offered a PIN change option at the ATM (47%) and not being able to find the Bank's ATM (20%) - a particular issue for those using online accounts without dedicated ATMs.

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Consumer behaviour in situations when unable to recall their PIN, will have a disruptive impact on card issuers

❏   Consumers will resort to other forms of payment. When recalling their last experience of using Chip and PIN 26% had experienced problems. Being unable to recall their PIN 6% paid by an alternative means and a further 18% signed a paper receipt - an option that would no longer be available in 2005. The delay will impact on queuing times and hence customer service in-store.

❏   Many consumers will abandon purchase - impacting on consumer spending in January 2005. When asked how they would respond if unable to recall their PIN, 42% of respondents said they would be likely to abandon their purchase and return later, with a worrying 38% saying they were likely to abandon their purchase altogether. Given the other findings of the survey, these situations will arise frequently and could depress consumer spending by several percentage points in January 2005 - hitting card issuers and merchant acquirers, as well as retailers.

If consumers are not ready for Chip & PIN, card issuers will bear the cost of customer dissatisfaction. Card issuers and merchant acquirers need to join together to put pressure on the PMO to co-ordinate their efforts and to send out the right consumer messages. In addition, they need to think about how to really make it much easier for consumers to manage their PINs, to avoid them resorting to other methods of payment or abandoning certain cards.

Opinion ○ Events Diary

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