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This month saw the eagerly awaited launch of the English National Smart Card Project toolkit (a technical review of the kit follows) finding the kit and the relevant information from the various web-sites test's ones ability as it break's all the rules about 2 clicks maximum to get to where you want to be. Let's hope the information in the kit is easier to follow.

February, apart from being the month of love is also the month when anybody who is anybody in telecoms ventures to Cannes. Lots of exciting technology to encourage us to use our phones, but not a lot about the radiation from these devices. I wonder if the mobile phone industry will be facing the same litigation in 20 years time as the tobacco industry is facing now.

MasterCard announced the launch of a new service to combat rising credit card fraud currently running at 400 million pounds last year. They are going to text cardholders, who have subscribed to the service, of any high risk transactions on their card. MasterCard anticipate about 1000 text messages an hour. The cardholder can then contact the bank to confirm or deny the transaction. Sounds like a brilliant idea but will the bank call centres be able to cope with that level of calls. One doubts it.

Charles Clarke, UK Home Secretary has decreed that all Asylum seekers will be finger printed on entry to the UK. One wonders how they will undertake the necessary fingerprint comparison that may prove to be difficult for a large database.

Will it be a biometric template or complete pattern recognition from the complete image?

Patsy Everett  
 Managing Director  
*Smart Card News*

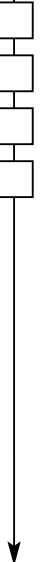
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# What's the Vision



By Dr. David Everett, Chief Executive Officer, Smart Card Group



Dr. David Everett

The English National Smart Card Project (NSCP) has this month released its smart toolkit, which offers English Local Authorities (LAs) the help they need to set up a multi-application Smart Card scheme. The toolkit, which was produced by Bolton Metropolitan Borough Council, provides a step by step guide to setting up a Smart Card scheme to enable councils to improve access to services for citizens. The toolkit takes users from identifying a scheme to implementation based on the expertise and experience from officers at Bolton who have implemented the council's own Access Bolton Smart Card scheme

The toolkit can be found at [http://www.nwegg.org.uk/interface/view\\_adhocpage.asp?id=27](http://www.nwegg.org.uk/interface/view_adhocpage.asp?id=27) with all the supporting documentation on the NSCP site at [www.nationalsmartcardproject.org.uk](http://www.nationalsmartcardproject.org.uk) The toolkit itself is a high level document that covers all aspects of the business of setting up a Smart Card scheme right the way through from the business case to the roll out plan. Separate sections cover topics such as business rules, legal issues, procurement, data protection, and marketing to name just a few. One particular application has its own section which is Transport (ITSO) and whilst an important topic it seems out of place at this level. The subject of ITSO crops up in many of the supporting documents and there seems to be a serious threat that transport ends up to be the driving characteristic of Local Authority Citizen cards. Unless the LAs propose to become transport operators this appears to be a little like the tail wagging the dog.

Understandable but disappointing is the lack of a *vision* that says "here is what we should do", instead we are given every option and left to flounder. The problem is that the higher objectives of a common approach with interoperability can never be achieved and the quality of some of the supporting papers from the NSCP leaves something to be desired and is likely to cause even further confusion. If you don't know where you are going you are never likely to get there! The first problem comes in trying to define the business case, the key driver is quoted as the ODPM priority Outcomes which encourages LAs to address libraries and leisure centres. However the NSCP Business case documents point towards authentication as the primary driver. If you're not feeling confused at this stage then other documents show you that the majority of Smart Card LA projects are actually starting with cashless catering in schools. The trouble is that, as the toolkit points out you need to initially address some fundamental issues,

- Will the scheme be limited to only services provided by the Authority?
- Will the scheme give access to other public sector services or those of partners?
- Will the citizen card be used as an authentication token?
- Will the scheme be interoperable with others?

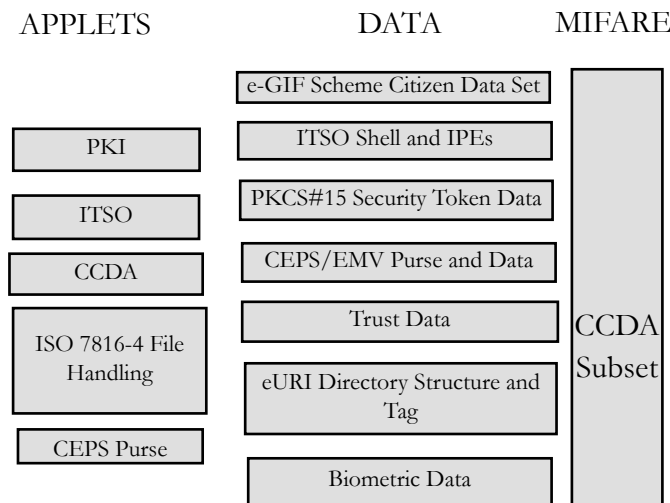


Figure 1



Well perhaps we should look in the Strategic LA Smart Card Architecture Document (see *figure 1*) to find the card contents. Now perhaps this is *the vision* but if that is the case it might appear misguided at the very least. Does anyone seriously imagine that citizen cards are going to carry CEPS (Common Electronic Purse Specification) or EMV (Europay, Mastercard, and Visa) financial applications? Even if you could agree the technical architecture, the commercial authority, responsibility, and liability issues would keep you busy before you even tried to sort out the brand and logo considerations. And biometrics, well that's nice and according to The Market Research Starter Pack Requirements document it's an alternative to cryptography as a means for authenticating a person. Did anyone review these documents?

CCDA is the Common Cardholder Data Application, while ITSO is there as an applet. If you are going to have Mifare why wouldn't you put it there? The PKCS#15 for the Public key cryptography seems a good idea and hopefully that's what the PKI applet does. The Toolkit is an excellent idea and undoubtedly would help a LA new to the field to understand the business and commercial approach to setting up a Smart Card scheme. In terms of the supporting documents drawn from the NSCP, well these documents need a serious review. But perhaps most of all it would have been really nice to have seen a *vision* of what the Citizen card should be.....

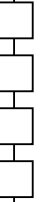
[www.nationalsmartcardproject.org.uk](http://www.nationalsmartcardproject.org.uk)

## SIM Evolution



The SIM card has evolved into the multi-MegaByte SIM. A new range of SIM cards has been designed by Gemplus to support mobile network operators in their business and technology challenges arising from multimedia convergence. Branded GemXplore Generations, this new breed of SIM card offers increased flexibility, larger memory and unrivalled performance as well as innovative services to help mobile operators build differentiating service offers for their customers. GemXplore Generations offers a "pick and plug" card design during the pre-issuance phase and a unique service for remote upgrades once the card is in the field. This will offer significantly reduced time-to-market and increase the capacity to upgrade SIM-based services. It will also enable the personalisation of services to each market segment, even when the card is in the hands of the end-user. Based on a new modular high performance 32-bit operating system the GemXplore Generations Multimedia breaks down the traditional barriers associated with SIM use by removing the limitations of memory size and offering high speed data transfer between the handset and the SIM.

The SIM Smart Cards comply with the latest standards and rely on a full infrastructure of services helping mobile operators stimulate multimedia service adoption. At the high end of the range, GemXplore Generations Multimedia has been developed to break down the traditional barriers associated with SIM use by removing the limitations of memory size, with gigabyte storage capacity, and by offering high speed data transfer between the handset and the SIM. This means that the SIM evolves into a trusted device where the mobile operator can remotely manage all mobile services and where all personal and multimedia content can be stored. This facilitates and secures the management of multimedia services as well as continuity of service for the end-user when changing handset. GemXplore Generations helps operators improve their relationships with their end-users and facilitate service use through a "web-like" presentation of SIM-based services and by unifying service management in a unique and secure location. "With over one million subscribers to our i-mode service, we were interested in what the SIM has to offer in terms of a centralised storage for all content and easier portability when changing handset", said Georges Passet, Chief Technology Officer, Bouygues Telecom.





## Smart Cards

### Gemplus and Axalto Cross Licenses

Gemplus has entered into a non-exclusive cross-licensing agreement with Axalto N.V, granting each other broad rights under their respective patents in the areas of Smart Cards and related devices. The agreement will enable each company to continue developing their respective technologies and to compete more freely in the growing markets for their products. The terms of the agreement are confidential.

### Oberthur Unveils GIGAntIC

Oberthur Card Systems has announced their new GIGAntIC card, the first fully functional 128Mbytes USIM card empowered by M-Systems' MegaSIM technology. Compared to current USIM cards available today in the field, Oberthur's GIGAntIC increases the memory capacity by one thousand and the communication speed far and beyond any current industry performance.

### Travel Combo Card for Taiwan

Cathay United Bank and E.Sun Bank will supply the Transportation Bureau of Kaohsiung City Government (KCG) with a MasterCard OneSmart PayPass Chip Combi Smart Card for the KCG transportation project. The TaiwanMoney Card will be used as a dual payment card and e-ticket card for public transportation throughout Southern Taiwan.

### SCS Wins UK Transport Contract

Smart Card Solutions (SCS) has won a tender from the UK Department for Transport to provide technical support to AILO, the Association of ITSO Licensed Operators. Under the contract, awarded by the DfT to Smartex Limited, SCS will be responsible for all technical support required by AILO. This includes the production of Codes of Practice and User Guides to facilitate the establishment and management of transport schemes complying with the ITSO Smart Card specification. The DfT has invested in the creation of the ITSO specification, to stimulate the uptake of interoperable electronic ticketing, seen as a pre-requisite to driving up the use of public transport across the UK. The ITSO specification was finally published in April 2004, and the first ITSO-compliant schemes are now in pilot phase.

### Taiwan Gets Transport Smart IC Cards

MasterCard International has won the bid for the Kaohsiung City Government (KCG) transportation project in Southern Taiwan. Teaming up with a consortium of industry players, MasterCard will introduce the world's first MasterCard OneSMART PayPass Chip Combi Card, a dual interface Smart Card, as a payments solution for Southern Taiwan's transportation system. Upon implementing the Smart IC Card system and issuance of the MasterCard OneSMART PayPass Chip Combi Card, citizens of Southern Taiwan will be able to easily pay for transportation usage on intercity coaches, local buses, trains, harbour ferries, and public car parks.

### Paper Certificates Phased Out

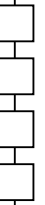
Gemplus has participated in a recent partnership between Digigrefe, the registry office of the commercial court of Paris, and Sigillum Technologies. This partnership was set up in November 2004 in order to develop secure online transaction solutions using electronic certificates. Gemplus joins this partnership to ease the use of e-certificates by storing them on Smart Cards. The Smart Card acts as an "electronic key" that will be used to sign for and encrypt the transfer of electronic documents from Digigrefe.

### Inside and Axalto Team

Inside and Axalto have formed a partnership to provide a full range of proximity services to GSM mobile phone customers. The companies will use Axalto (U)SIM dual interface Smart Cards and Inside's PicoRead contactless reader IC along with an antenna embedded in the handset to enable a full range of proximity services in transportation, access and mobile payment market segment. Such services include the ability to reload transport tickets and e-purses, as well as view account information on the handset.

### DAL Achieves FIPS Certification

Dreifus Associates Limited, Inc. (DAL) has received FIPS 140-2 Level 3 security certification for its C3 Applet Suite on Axalto Cyberflex Access 64K Smart Cards. This marks the first time any applet suite compliant with the latest Government Smart Card -- Interoperability Specification (GSC-IS), version 2.1, received this level of security certification.





## Clermont-Ferrand Smart Card System

The ERG Group, in consortium with INEO and Parkéon, will supply a Smart Card based automated fare collection system for the Syndicat Mixte des Transports en Commun (SMTC) in the region of Clermont-Ferrand. The new Smart Card system will be the first large urban ticketing system in France to abandon the magnetic ticket technology currently used throughout France in favour of Smart Card technology. The project, which is valued at over 4 million euros, will begin rollout immediately and will be fully implemented in September 2006.

## Sun Improves VA Patient Care

Sun Microsystems, Inc. has announced that the Veterans Affairs Hospital (VA) has improved carer productivity by using the Sun Ray ultra-thin client solution for delivering highly secure and mobile access to all hospital patient records using Java Card technology-enabled Smart Cards. Healthcare providers can attend to patients while electronically carrying their records throughout the hospital via the Sun Ray ultra-thin client's "hot desking" feature, allowing a caregiver's "secure session" to follow him or her automatically from thin client to thin client across the entire hospital campus via their individualised Smart Card.

## French Transport Smart Card System

In a move designed to create a transport fare payment system compatible with all transport in the region, the Conseil General De La Gironde in the Bordeaux region of France has chosen ERG Transit Systems to provide and install their Smart Card fare collection system. The contract, which has a value of 2.4 million euros, will be completed in mid 2006. The new system will allow the use of paper tickets, magnetic stripe tickets and Smart Cards, greatly increasing passenger convenience. It will be installed on 350 buses serving the interurban area.

## Keycorp MULTOS for Asia

An undisclosed large multi-national card issuer has ordered the Keycorp MULTOS step/one platform for its EMV rollout of MasterCard International Smart Cards. The order was placed through Singapore-based Cassis International, which provides issuing services, including card personalisation, for the bank.

The initial rollout will occur by the end of the year in the card issuer's Malaysian branch network. The group will be the first card issuer in Asia to rollout cards based on the MULTOS step/one platform. It will also be the first MULTOS step/one customer for MasterCard. Keycorp's MULTOS step/one is a new entry-level open Smart Card operating system designed to give financial institutions a low cost way to adopt an EMV (Europay MasterCard Visa) Smart Card strategy and then make the easy transition to a fully configured MULTOS platform at the time of their choosing.

## Card System for Rwanda

ACI Worldwide has succeeded in a live implementation of its open systems software for payments and card management at SIMTEL, an organisation created by the Rwandan government to modernise the country's national payments network. SIMTEL has deployed BASE24-es to drive its core payments network and ACI Card Management System for the management of card accounts and personalisation. The software will provide a flexible framework for card transactions and help SIMTEL promote the use of cards among Rwanda's largely unbanked population.

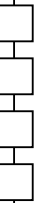
## New Interface for Smart Cards

Infineon Technologies AG and Renesas Technology Corp will now offer a common software interface for their 32-bit families of Smart Card microcontrollers. Such a standardised software interface will help to accelerate the development of new Smart Card applications, as it enables card manufacturers to re-use their application-specific software across various Smart Card IC platforms, which are widely used in mobile communications applications.

Market experts expect that the additional benefit of software compatibility will further accelerate the introduction of 32-bit solutions, as the Smart Card industry demands chip card controllers offering high performance and EEPROM memory of at least 64K bytes.

## New Chip Card Package

Infineon Technologies AG and Giesecke & Devrient GmbH (G&D) have jointly developed an innovative production method for chip packages specifically for use in chip card applications.





The FCOS (Flip Chip On Substrate) method is the first in which a chip card IC is rotated or flipped inside the module housing it. The functional side of the chip is attached directly to the module by means of conductive contacts; conventional gold wires and synthetic resin encapsulation are no longer required. The new attachment technique saves space in the module; additionally, it is even more robust than the conventional wiring solution.

## Ingenico to Supply IBM

Ingenico have formed a marketing partnership with IBM, where Ingenico will supply payment terminals and transaction acceptance technology for IBM's Retail Store Solutions. This marketing agreement will enable retailers to implement payment solutions using IBM store management software and Ingenico payment terminals.

## e-Passport Reader Put to the Test

ACG Identification Technologies has announced the results of the tests conducted on its new HF Dual ISO Reader, especially designed to perform data capture from RFID enabled electronic passports. Tests were carried out by Australia's Department of Foreign Affairs and Trade (DFAT) involving 11 different reader supplier companies in the RFID industry, offering hardware solutions for e-Passport projects. The HF Dual ISO RFID Reader was rated the number one performer of the eleven tested as it was able to read the greatest number of integrated circuits.

## Cheshire Lead the Way with ITSO

Cheshire County Council, UK, has become the first authority to receive Smart Card certification from ITSO following testing at Integri. The "Cheshire Travelcard" test samples were produced from pre-approved Mifare 4k cards, supplied by Magnadata, and loaded with an ITSO stored travel product by Cheshire on equipment supplied by ESP Systex. Although Cheshire County Council is the first to receive their certification, this could speed-up the move to an ITSO system for other schemes, which use the same suppliers, and take the same route to launch their schemes.

## Wayfarer Passes ITSO Test

Integri, the company responsible for ITSO accreditation, has given Wayfarer Transit Systems the green light to roll out the TGX150 electronic ticketing machine (ETM) POST for the Early Adopters scheme.

The company visited Wayfarer's customer test facility in Poole to carry out a variety of ITSO pre-certification tests to ensure that the solution being developed for the ITSO Early Adopter trials in the UK would not compromise any security issues. In fact, Wayfarer is the first ETM manufacturer to trial ITSO on-bus and is currently supporting the BlazeField Early Adopters Trial programme. This is a trial scheme for the NoWcard project. The BlazeField operation consists of 145 buses. Fifteen of these vehicles will be upgraded at the Blackburn, UK, depot to process ITSO Smart Cards. These buses are branded and run on the dedicated 225, Clitheroe-Blackburn-Bolton service.

## VASCO Acquires Reader Company

VASCO Data Security International, Inc has acquired AOS-Hagenuk of 's-Hertogenbosch, The Netherlands, a provider of security-based Internet appliances and secure Smart Card readers. VASCO will acquire all of the stock of AOS-Hagenuk, in exchange for consideration totalling 5 million euros (\$6.5 million U.S. dollars), consisting of 3.75 million euro cash & 1.25 million euros VASCO common stock

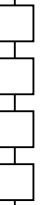
## Biometrics

### Fingerprint Gates at Bahrain Airport

Fingerprint gates (e-gates) are to be installed at Bahrain International Airport to cut down on the formalities for people holding the new smart ID card. Once the electronic gates are installed Bahrainis with the new Smart Card will not have to go through the standard immigration counters. If the citizens fingerprint matches that stored on the Smart Card the gates will automatically open. However, passengers who have been blacklisted will not be allowed through the gate

### Tokyo Bank Issues Biometric Cards

The Bank of Tokyo-Mitsubishi has announced its free issuance of biometrics based bankcards that identify holders by their registered palm vein patterns when they withdraw money through Automated Teller Machines (ATM). The bank will charge no fees for the Super IC Cards and compensate holders for up to 5 million yen if they fall victim to thefts using forged bankcards.





## Major U.S. Airport Selects Bioscrypt

Bioscrypt's biometric fingerprint readers are to be installed as a security upgrade at a major U.S. International Airport. With the implementation of biometric access control readers at employee-only areas such as runways, tarmacs and baggage handling areas, airports are now introducing multi-factor authentication.

## Biometric Access for Malaysian Govt

FaceKey Corp has announced that it has shipped several 'Executive Suite' Access Control Systems to Secured Digital Applications, Inc., for use by a Malaysian government agency. The Executive Suite is designed for corporate offices and other areas requiring the highest level of security for access control. Both fingerprint recognition and face recognition are required before authorised users are granted access. The system works by converting information about an individual's face and fingerprints into unique templates. Authorised users are enrolled into the system by recording their facial and fingerprint patterns, which are encrypted and serve as the user's template.

## UK Police Choose SEGEM

SAGEM has just signed an eight-year contract with Northrop Grumman Information Technology to provide advanced biometric identification technology that will be used to upgrade a computer system linking more than fifty police forces and agencies in the United Kingdom. The new system, called IDENT1, will enable these fingerprints and marks to be searched against a combined database of more than six million ten-print records and more than one million marks (latents) in minutes. Further developments will include mobile fingerprint checking, facial imaging and video identification.

## US Calls for Biometric Standards

At the London School of Economics and Political Science, Tom Ridge, the US Homeland Security Secretary, has called for a new international standard for putting biometric data such as fingerprints on passports, and said the technology could play a vital role in combating terrorism. "Common international standards of biometrics must be developed. In my view, the sooner, the better," he said. The State Department will begin issuing new biometric passports within a few months, containing a microchip holding a citizen's name, birth date and photo.

## Precise Partners SAFLINK

Precise Biometrics has licensed Precise Match-on-Card technology to SAFLINK. With Precise Match-on-Card (MoC) technology SAFLINK will add an additional security component to their jForte card, a high assurance token designed for the U.S. Department of Defense (DoD) and similar agencies.

## ImageWare Supports Biometric Pilot

General Dynamics Advanced Information Systems has selected the IWS Biometric Engine as the foundation of a federal biometric pilot project. The IWS Biometric Engine is a biometric identity management platform for multi-biometric searching and matching that is scalable, technology agnostic and allows organisations to manage population databases of unlimited sizes. General Dynamics will use the IWS Biometric Engine as the platform for its biometric project to test the viability of increased accuracy when using multiple biometrics, including face, finger and iris, within a single integrated environment.

## Biometrics for Swedish E-Passports

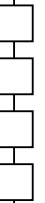
Identix Incorporated is part of a team led by Sweden-based, Snabbfoto AB and its business area Speed Identity to deliver the facial enrollment solution for the new Swedish biometric passports to the Swedish National Police Board. The biometric solution selected by Sweden is based on an enrollment platform developed by Speed Identity that integrates Identix FaceI biometric facial recognition technology.

Sweden has adopted this solution for its e-passports to help ensure that it is in initial compliance with international standards for machine-readable travel documents, as well as to help meet the U.S. mandate that all visa waiver countries begin issuing biometrically-enabled passports by October 2005.

## Near Field Communication

### Alliance Drives NFC Deployment

Royal Philips Electronics has announced an alliance with content and service providers SMART System Technologies (SST) and 3united to deliver mobile entertainment applications as well as loyalty and reward programs via Near Field Communication (NFC) technology.





## Inside Renames R2R to eNFC

Inside Contactless has announced its decision to rename its R2R (Reader-to-Reader) technology to eNFC, enhanced NFC technology in order to position it on the market as fully compatible to NFC. eNFC refers to the technology that allows a contactless reader to communicate with either a card or another reader.

## World's First NFC Enabled Mobile

Nokia has introduced the world's first NFC product for payment and ticketing which will be an enhanced version of the already announced Nokia NFC shell for Nokia 3220 phone. The Nokia NFC shell for payment and ticketing will be available in mid 2005. The product will be distributed to consumers through operators, and as such it will not be generally available as a traditional enhancement.

## Market in Figures

### 4th Quarter Results for Oberthur

Oberthur Card Systems' fourth quarter (2004) sales reached 132.1 million euros, an increase of 11.1% over 4Q/03 and 25.3% over 3Q/04. The sharp increase in sales in 4Q/04 over 4Q/03 resulted mainly from an all-time record shipment of microprocessor cards (44.1 million units) and a sustained demand for services and solutions (+15.4%). In the payment market a stable average selling price and an increase in volumes (+18.3%) contributed to a significant increase in revenues (+19.6%) on a year-on-year basis. Sales in the Identity and Security segments reached 11.5 million euros increasing 9.7% annually. This growth comes mainly from both Pay-TV cards and identification cards.

### 2004 Financial Results for Gemplus

Gemplus has reported its results for the fourth quarter and full year ended December 31, 2004. They reported a strong revenue growth throughout the year, up 15.5% to 865 million euros. Their operating income has been reported to be 41.9 million euros and their net profit is reported to be 4.7 million euros. The company's ID and Security sections revenue was driven by Enterprise Security solutions, particularly in the US and the UK. Gemplus' strategy of selling subsystems based on software components, value-added services and high-end cards led to a 7.2% point gross margin improvement, with a significant shift in the sales mix.

On a geographical basis, revenue from the Americas was up 47.9% and Asia 21.9%, currency adjusted, both driven by the Wireless segment.

## Axalto Reports Strong Year

Axalto has announced a fourth quarter revenue increase of 30%, at \$ 291 million versus \$ 225 million in the year-earlier period, and a 24% progress at constant exchange rates. Axalto saw record growth in their Card segment of 51% in sale volumes (112 million microprocessor cards were shipped during the quarter versus 74 million for the same period of a year ago). Sales of SIM cards totalled 84.1 million units over the quarter, and 257 million units for the full year. Both are new records for Axalto. As a result, full-year 2004 consolidated revenue came in at \$ 960 million, a 25% rise on full-year 2003, and a gain of 19% at constant exchange rates.

## OTI Sells InterCard for \$2.5 Million

On Track Innovations Ltd. (OTI), has finalised the sale of its wholly-owned German subsidiary, InterCard Kartensysteme GmbH for approximately \$2.5 million. This sale follows OTI's acquisition of ASEC S.A. of Poland that has since received some orders valued at approximately \$1.5 million for 2500 contactless reader equipped terminals.

## ActivCard Reports Growth

ActivCard Corp has released its financial results for its first quarter of fiscal 2005 ended December 31, 2004. In December 2004 the Company announced the acquisition of the remaining 51% equity of Aspace Solutions Limited. Revenue for the quarter ended December 31, 2004 was \$11.6 million compared to \$6.7 million for the quarter ended December 31, 2003, an increase of 72%. Revenue grew by 14% during the quarter ended December 31, 2004 compared to \$10.1 million for the quarter ended September 30, 2004.

## Radio Frequency Identification

### RFID Solution for PayPass

Texas Instruments plans to deliver ISO/IEC 14443 compliant radio frequency identification (RFID) chips designed to meet the stringent security requirements for MasterCard International's PayPass line of RFID payment cards and tokens.



TI will submit this new RFID product for MasterCard certification in the second quarter of 2005. Full production is planned to start in the second half of this year.

### Sun Addressed RFID Requirements

Sun Microsystems, Inc has announced the availability of the Sun Java System RFID Tag and Ship Solution and the Sun RFID Reference Architecture. Sun also announced its plans to create RFID Industry Solution Architectures (ISAs) to meet the unique RFID requirements of vertical markets including: government, manufacturing, pharmaceutical and retail. In addition, Sun and SeeBeyond outlined plans for the forthcoming RFID ISA for Retail, which will offer complete, integrated RFID solution designed specifically for retailers.

### Cisco Joins European RFID Centre

Cisco Systems has joined the European RFID Centre to collaborate with European businesses in developing their RFID strategies. The RFID Centre, which officially opened on January 25th 2005, provides a showcase of RFID applications for European business delivering value through live demonstrations, educational services, networking events, and impartial advice.

### ASK Selected by DHL Fashion

ASK UHF C.label, a smart paper label, has been selected by the System Integrator NBG ID and DHL Fashion to track garments at its 18000 square metre Paris distribution center. DHL fashion is in charge of forwarding 70 million clothes a year on 15 platforms of fashion clothing suppliers and boutique operators. RFID is implemented in the whole supply chain down to the retail shop. It involves garments reception, inventory, orders picking and delivery.

### UPM Rafsec Opens German Office

UPM Rafsec has opened a new sales office in Dreieich, Germany, in response to the growing demand for RFID technology. Following recent mandates issued by large organisations such as Metro and Tesco, European suppliers of the fast moving consumer goods industry are gearing up to apply RFID tags to product shipments at a pallet and crate level. This acceleration of the market development created significant growth opportunities for UPM Rafsec.

## On the Move

### Simpay Appoints New CEO



Simpay has appointed David Taylor as Chief Executive Officer (CEO). Taylor succeeds Tim Jones, former CEO of Simpay. Jones will continue to act in an advisory capacity to the company.

### NovaCroft Strengthens Card Division



Novacroft has appointed Janet Taylor as Business Development Manager of its Card Management division. Janet joins the team in line with the company's plan to consolidate Novacroft's position in the smart and non-Smart Card market place.

### New Director at LogicaCMG



LogicaCMG has appointed Paul Stam de Jonge as global Radio Frequency Identity (RFID) solutions director to head up the company's RFID centre of excellence.

### Trintech Appointments New CEO



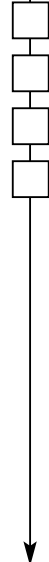
Trintech Group Plc has appointment of Paul Byrne as President and Chief Financial Officer (CEO). This new position will report directly to Cyril McGuire, Trintech's Chief Executive Officer and Chairman and will have overall responsibility for sales, marketing, development, operations, finance and corporate affairs

### ORGA Strengthens Team



ORGA Kartensysteme GmbH is strengthening its management team by appointing Dr. Robert Zores, who was previously Chief Technical Officer (CTO) at AOL Deutschland.

Mr Zores will take over as ORGA's CTO, with responsibility for managing its international development units.





# How 'Smart' Can India Get?

By Uday Lal Pai, Senior Freelance Journalist



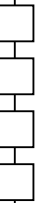
After all the years of hype about the Smart Card and its prolific use inside the country, India is finally seeing some progressive steps towards deploying it in a big way. Currently, the Smart Card base in India is estimated at about 40 million. This is projected to be 400 million numbers in the next few years. Obviously, the Indian Smart Card market has great business potential. The Smart Card market in India is already flourishing and is poised for rapid growth with Government agencies, Banks, Financial Institutions and Corporates, planning massive deployment of Smart Cards in their activities. A high-powered committee appointed by the Ministry of Information Technology, Government of India, is currently working out a strategy to introduce smart cards for Government activities such as citizen ID, voting, postal services, Ration cards, employees' insurance, Driving License, Ticketing, pension records, e-cash, access control, banking, healthcare, security, Loyalty and retail etc.

Few countries in the world can match the cultural diversity of India. And this variety gives a distinct flavour to Indian weddings as well. The wedding extravaganza costing millions of pounds is a big pomp and show for the rich. A few months back a grand gala wedding of the son of Sahara Group Chairman was celebrated in North India. The invitation cards to the wedding were Smart Cards, according to Yogesh Kankaria, chief executive officer, Score Information technologies. Kankaria said: "The wedding invitation cards adopted by the Sahara Pariwar were smart cards - the chip embedded in the invitation cards helped announce the arrival of the invitees along with a display of their photograph and a pre-recorded welcome message. Most importantly, it helped to manage the security very efficiently." The card, in fact, helped in monitoring most of the nitty-gritty's - it even told the visitors where their cars had been parked.

Smart Cards are being used by several private companies and some educational institutions for almost all their transactions on campus. So, if you want to buy a soft drink at Infosys Technologies Limited headquarters in Bangalore, all you need to do is to flash your I-card and walk away with your favorite drink. The country is about to witness a boom in Smart Cards, with applications touching all parts of our lives. Credit and debit cards, pre-paid public transport tickets, toll collections and healthcare. The possibilities are endless. The usage is projected to go up 10 times in five years. Consultants Frost & Sullivan say the Asia-Pacific region alone accounts for about 34% of the volume, with countries such as Malaysia, Hong Kong, India, Taiwan and South Korea leading the rush. The Indian Smart Card industry, growing at 45% annually, could reach \$6 billion by 2010, say experts who predict an eight-fold increase in the next five years.

Presently India has approximately 50 million Smart Cards users with around 30% usages in Cell phone SIM cards. The Indian Smart Card industry is growing @ 45% per annum. Presently, India has got around 3 million mobile phone users and it is expected to reach 8 million users by year 2003. The requirement for Smart Cards as identity cards, the combined municipal card and the welfare sector is expected to be 600 million by the year 2005. The GSM-based cellular subscriber base increased by 1.4 million in December 2004 alone, to touch 38 million. Apart from the basic function of subscriber identification, SIM Cards will be increasingly used for providing value added services by the cellular operators to the mobile subscribers. The very basic way of life of an average Indian is expected to undergo a sea-change with this rapid growth of Smart Card enabled cellular telephony and the launch of Mobile to Mobile payments.

First, MasterCard and Visa have mandated the use of Smart Cards for credit and debit applications. This means that all banks will, by default, issue only Smart Cards to their customers. Although this will be a time-bound roll-out, the expectation of market players on this issue is very positive and most feel that Smart Cards will be rolled out in a phased manner by 2005-2006. Moreover, all new driving licences in the country issued after January 2004 is mostly in the form of Smart Cards. Seven states, including Maharashtra and Haryana, have mandated the issue of Smart Card driving licences.



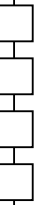


The pilot project of the multipurpose national ID cards will be implemented by the Government for about 2.85 million people in 24 districts of 13 border and coastal States of the country to reduce infiltration and strengthen internal security. Talking about the Pilot project, J.K. Banthia (Registrar General of India) said, the data for the population register has been collected and a bilingual database has been created for 3.05 million persons in six different regional languages in the pilot area, Integration of a photograph and finger biometry has been completed for about 1.2 million persons; and verification of citizenship status has begun. While the Indian government is engaged in spadework for the National ID Card scheme, Smart Cards are already making inroads. Riding on state government initiatives - both pilot and mammoth - these chip-based cards are being deployed for driving licences, vehicle registration, health, identity and social security purposes. In fact, the Delhi transport department has been switched to smart optical cards for all new vehicle registrations in mid-September. Brihanmumbai Electricity Supply and Transport (BEST) has launched a pilot for automatic fare collection in Mumbai buses through Smart Card technology.

Millions are being invested as chipcard IC makers, card manufacturers, OS provider's system integrators and service providers like Infineor, Versatile Card Technologies, ACG, Orga, Gemplus, Eximsost, NIC, IIT Kanpur and so on are jumping into the arena. Navnit Gulati, vice president, Shonkh Technologies International Ltd - the system integrator for the vehicle registration project in Delhi - said, "The Smart Card has an additional optical strip, provided by technology partner Laser Card to store additional information such as vehicle history, accidents records log, tax, permits, insurance apart from the data required under the Motor Vehicle Act." With the Indian telecom industry growing at the rate of over 1.5 million subscribers per month, the SIM card in the mobile phone scene is indeed beginning to hot up. There's also the banking and financial services sector with its ATM cards and credit cards that are Smart Cards too. Orga is planning to provide 50 million cards (GSM Phone Cards and Banking Cards) to the Indian market by the year 2005. Intel is introducing research in to chip development and designing in India. A 10 Member consortium consisting of Compaq, ProtonWorld, ACI, Gemplus, Schlumberger, Infineon, Datacard, Alittleworld, CMS, FSS, and Mixtorf are planning to launch a multi-application Smart Card based payment infrastructure project in India.

**Driving licence rush:** Smart Card based driving licenses is another area that's fast developing. Already three states - Gujarat, Madhya Pradesh and Goa - have adopted them, while Maharashtra and Jharkhand also seem set to follow suit. Meanwhile, tenders are being drawn in Orissa and Assam. The number of driver's licenses is at present estimated to be 150 million. "We see a huge opportunity in India in the banking sector, e-passport applications, the national identity card project, ticketing for the Delhi Metro and loyalty programmes. We've so far delivered solutions for SIM cards and transportation," Kumar says. The Ministry Road Transport and High Ways together with National Informatics Centre with participation from the Smart Card Forum of India (SCAFI) formulated the National Interoperable Standards for the use of Smart Cards for driving licences and vehicle registration applications. Officially named as SCOSTA, now NIC has set up the National Certification body for certification of Smart Cards for Scosta compliance. The Ministry of Road Transport and Highways has already issued draft gazette notification to provide a legal basis for the minimum specifications and add on functions/technologies that can be used to issue of Smart Card based driving licence and vehicle registration documents.

**Banking, healthcare and retail:** The demand for Smart Cards in the health care & transportation sectors is expected to reach 350 million by the year 2005. Several pilot projects have been in operation using Smart Cards which have banking applications. The project in Manipal Academy of higher education is an excellent example of a large campus using Smart Cards primarily for payment applications and also for other campus applications. A similar application is also in operation at the Satyam campus. Several banks have issued Smart Cards in relatively small numbers for pre-authorized debit applications as well as for banking loyalty applications. Some initiatives have been taken for using Smart Cards for healthcare. Bhopal Gas Relief Project, Wockhardt Project, ECHS and a few others have already shown success in using Smart Cards for healthcare applications. The ECHS is India's largest Smart Card based project covering the entire country. The scheme covers approximately 2 million pensioners and their dependants, a total of ten million people. It is mandatory for all service pensioners retiring after April 2003. It is the first time that a national Smart Card based project has been undertaken in the country.





There is keen interest among Indian banks to implement Smart Cards as part of their full range of offerings. Some have already started focusing on building the acceptance infrastructure, including deployment of chip-enabled ATMs and point-of-sale (PoS) terminals. Says Visa International's country manager for South Asia, Santanu Mukherjee: "The payment infrastructure in India is still at a nascent stage and fortunately with early interest in chip migration, India will be at a relative advantage to other countries in the region, which have to bear the significant cost of replacing their magnetic stripe terminals with that of EMV chip-enabled ones."

The Reserve Bank of India (RBI) is pushing for standardisation of all e-payment initiatives in the country to promote efficiency of the electronic payment systems in the long-run. "The goal should be to allow products and services from different vendors to work together by means of inter-operable and seamless interfaces. This will allow for competition and reduce uncertainty in the market place and enhance easy acceptability," R B Barman, executive director, RBI, said. Even as the RBI is catalysing e-commerce and m-commerce, stimulating further migration of cash (bank notes and coins) to digital payment instruments, in order to increase the efficiency of payment systems, he felt that there is a need to define privacy rules since transaction trails could pose other risks to consumers.

Among the retail applications, Smart Cards have found a big usage by the petroleum majors. BPCL, HPCL and IOC have all introduced Smart Cards for loyalty applications and the loyalty schemes have become popular among the users. Gradually, multi-partner loyalty programmes are expected to find their way using the technological advantages of Smart Cards. By the end of 2004 about 3.5 million Smart Cards were used for loyalty applications and this is expected to grow to 10 million Smart Cards for loyalty applications by the year 2005. Also with MasterCard and Visa cards mandating all banks to change from magnetic cards to Smart Cards, that's another opportunity for the Smart Card industry. Says Kankaria, "With a population of a billion, India is one of the fastest growing markets - China being the other one." Score has helped the defence services introduce a medicare scheme for about 4 million ex-servicemen, pensioners, and their eligible dependents, for outpatient treatment at 227 polyclinics all over India, in-patient hospitalisation and treatment through military hospitals and out-sourced civil hospitals, etc. The security of the various processes is ensured through a combination of a key management system, biometrics and data communication security.

India may have been lagging behind in this area, but clearly things are hotting up now. Currently the Indian smart card market is confined to five basic applications namely telecom, banking and retail, transportation, healthcare and Government. There are other applications such as university and Electronic Access Control Systems (EACS) which are gaining acceptance in the country.

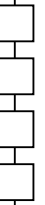
## Events Diary

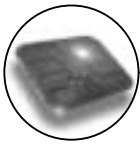
### March 2005

- 1 - 4 IC Card World 2005 - Tokyo, Japan <http://www.shopbiz.jp/pages/>, [machi@ics-inc.co.jp](mailto:machi@ics-inc.co.jp)
- 1 - 3 3rd Annual RFID World - Texas, USA - [www.rfid-world.com](http://www.rfid-world.com) - [m.keller@scievents.com](mailto:m.keller@scievents.com)
- 9 - 11 Smart Cards in eGovernment - Washington, D.C., USA - [www.smartcardalliance.org](http://www.smartcardalliance.org)
- 10 - 16 CeBIT - Hanover, Germany
- 15 - 17 2005 Electronic Transactions Association (ETA) Annual Meeting - Nevada, USA

### April 2005

- 11 - 13 The 3rd Middle East & Africa Card Technology Exhibition & Conference - Cairo, Egypt
- 10 - 13 Payments 2005 (by NACHA) - Texas, USA - [www.nacha.org/conferences](http://www.nacha.org/conferences)
- 12 - 14 SCA Card Technology Workshops at CTST 2005 - Nevada, USA - [www.smartcardalliance.org](http://www.smartcardalliance.org)
- 17 - 20 ASIS 51st International - Copenhagen, Denmark - [www.asisonline.org/education](http://www.asisonline.org/education)
- 19 - 20 SIM 2005 - Amsterdam
- 20 - 21 AIM Knowledge & Networking Forum - Wiesbaden, Germany - [www.aimglobal.org/aimforum](http://www.aimglobal.org/aimforum)
- 25 - 26 7th eyefortransport North American Technology Forum - Illinois, USA
- 26 - 28 Infosecurity Europe 2005 - Olympia, London - [www.infosec.co.uk](http://www.infosec.co.uk)
- 27 - 29 Biometrics World Asia 2005 - Singapore
- 27 - 29 RFID World Asia 2005 - Singapore - [www.worldofcards.biz/2005/rfidwa\\_SG](http://www.worldofcards.biz/2005/rfidwa_SG)





# The Dawn of the Electronic Passport

By Jason Smith, Production Editor, Smart Card News Limited



Jason Smith

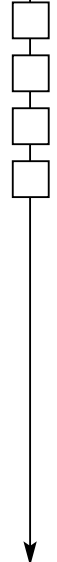
The U.S. Department of Homeland Security will later this year begin protecting their borders with a new high-tech passport that incorporates biometric facial recognition technology. This new form of secure travel documentation will carry a Radio Frequency Identification (RFID) chip embedded within it and will have the ability to store information related to the passport holder including biometric data. The RFID chip will instantly broadcast the passport owner's data to immigration officials who will have the ability to pick up the electronic passports data from a close proximity reader using the relevant scanning equipment. This then will allow officials to compare the information on the chip to the rest of the passport and to the person actually carrying it.

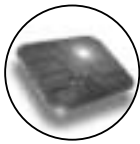
The US State Department plans to produce more than 1 million of the new electronic passports or "e-passports" and issue them during the second quarter of 2005 with full deployment in early 2006. Currently the State Department has not yet selected a company to handle this task but it has requested four technology companies to draw up proposals for introducing e-passports to the public. US President George Bush has set a deadline for March 2005 for the government's implementation of this prototype electronic passport. However even though the State Department is charged with the electronic passport initiative and implementation, the U.S. Government Printing Office (GPO) will actually have to design and print the biometric documentation. The GPO's electronic passport project is a three-phase process involving the GPO, the Department of State's Bureau of Consular Affairs and the National Institute of Standards and Technology (NIST). During the next phases, the GPO will manufacture test passports using chip solutions provided by all finalist companies. The NIST will then test the electronic passports for their ability to meet durability, security, and electronic requirements. A final selection of one or more vendors will take place after testing is completed.

Clarence Jellen, General Manager of the Security and Intelligent Documents at the GPO stated "We are expanding the pool of products to test before making an official decision on which products to use. The goal of the State Department and the GPO is to provide Americans with the best passport in the world. To that end we are actively testing electronic passports that embrace a wide range of technologies available today in order to help us meet that objective." To ensure the most effective technology is selected, the US GPO has expanded the test phase by an additional round of contract awards for the implementation of the project. The US Government Printing Office (GPO) has currently added four new vendors to its list, whose proposals were the highest ranked in the Solicitation for Offers (SFO) EP-2004 for the Electronic Passport, in addition to the four companies whose computer chips are already being tested for usage in the GPO's electronic passport project. GPO officials awarded ASK Contactless Technologies \$103,000 for the test project, EDS \$137,000, Oberthur Card Systems \$112,000, and OTI America \$92,000.

In October, GPO officials announced contracts for Axalto, which received two awards worth \$108,000. Olivier Piou, CEO of Axalto, commented: "Axalto supports the Government Printing Office's decision as it represents the best way to ensure that US citizens will benefit without delay from the increase in security that the electronic passport will provide. Since our contract award in early October 2004, we have fully complied with all GPO delivery and testing requirements". Infineon Technologies, received a contract worth \$108,000 and a team of BearingPoint and SuperCom, received a contract worth \$83,000. SuperCom also received another contract in a separate deal worth \$74,000. None of the selected companies have received any indication at this point whether they will be selected for additional stages. However, they all continue to work with the GPO on the testing phase.

Once finalised and completed this project will be the largest and most advanced smart passport project in the world to date. The scope of the project based on estimates means that at least 50 million new electronic passports will be issued within the US over the following five years. This deployment then makes the U.S. government the biggest advocates of Smart Card technology in the world.





# Secure End-to-end Transaction Methodology for the Citizen - Part 1



By Peter Tomlinson, Independent Consultant, Iosis

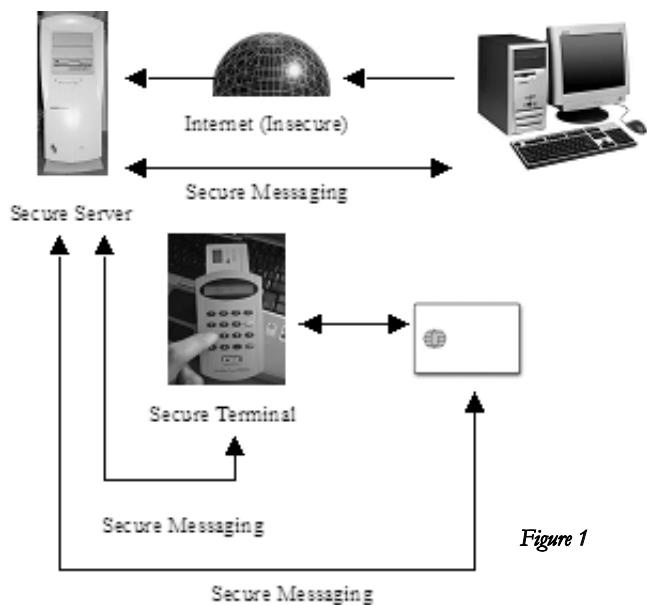


Peter Tomlinson

With growing use of the internet for transactions between the citizen and a huge number of organisations, particularly organisations in the public sector, the use of Secure End-to-end Transaction Methodology (SETM), in association with secure tokens (usually Smart Cards) and with secure terminal technology, is coming into increasingly sharp focus. This methodology, when used with suitable equipment, enables the protection of confidential information at all times: during storage, processing, and communication. The protection also extends across the interfaces with the user (the holder of the secure token). Very important aims are:

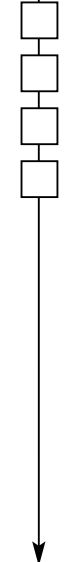
- ❑ Keeping personal data private by storing it only in a secure server and in the secure token (Smart Card), and transmitting it securely directly between token and server when it is needed for identification and authentication.
- ❑ Ensuring that only the holder of the secure token authorises a transaction, and thus prevent spoofing of the user's authorisation, even when an insecure PC is used as the primary user interface: SETM can deliver that in a PC-based terminal environment when authorisation takes place via a secure sub-terminal attached to the PC.

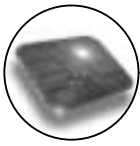
Well known is that anything passing across the internet is at risk of attack and exploitation, so we encrypt it when we want to secure it: that is the core of secure messaging. That technique is future-proofed, because, as the capability of the attacker grows, the encryption can be strengthened from time to time. SETM therefore safely use encryption of messages. SETM extends secure messaging beyond the internet leg of its journey, communicating directly from one secure node to another, without the message content appearing in the clear anywhere along its journey. For example, within SETM a Smart Card and a remote server send encrypted messages direct to each other (Figure 1), eclipsing today's common method in which the message appears in the clear in a PC before being encrypted again for the next leg of its journey.



Not always taken into account by today's system owners is that all message end points (e.g. server and terminal) are at risk of exploitation by malicious individuals, often via communications links (e.g. the internet, where attackers use both random and directed probe messages). When attacking an internet-connected terminal, the aim of the attacker is to subvert the terminal's operation and/or impersonate the authorised user.

The common user terminal, implemented in a PC, is a particularly weak point, and the risk to it is increasing as the attackers grow in sophistication. This risk threatens citizen and business encounters with the public sector, where both central and local government are increasingly offering (and are encouraged by European policy to offer) on-line transaction methods. Many of these transactions are 'unattended', meaning that the user of the system is not in the presence of a central or local government officer or authorised (and trained) agent, and thus the transaction process is not being mediated by any person as it would be if the transaction were conducted face to face in an office, or if the transaction were conducted by telephone.





Even a transaction conducted by post, using a form or letter that requires a physical signature by the citizen, is more secure than today's commonly used methods of conducting transactions across the internet. To protect our insecure terminals, in general we put up barriers (firewalls, virus and other malware detectors), and we keep our fingers crossed that nothing will get through. But the forms of attack are many and various, and many of those responsible for the end-point systems do not or cannot keep up with the protection offered.

This is an unsatisfactory situation, particularly where important personal information is being handled and where public money is at risk - here the use of SETM avoids critical information being compromised. But implementing SETM does not allow you to relax, because, when a PC is used, the risks of denial of service and theft of information typed in at the PC still requires firewalls and general internet security methods to be used. Importantly for the protection of the user, SETM requires that certificates (that can be authenticated using cryptographic methods) are stored in a secure token, and not in the PC.

Along with the end-to-end secure messaging, within SETM there is a transaction methodology designed to take advantage of the message security. The transaction methodology has to be implemented in every secure node (server, card, terminal) - and can of course, for convenience, be implemented in a PC. Secure terminals (more likely in the near future introduced as low cost secure sub-terminals attached to the insecure PC) handle the Smart Card, and such terminals also communicate with the card holder in a way that cannot be used or monitored by a host system such as a PC or remote server.

Of course many transactions will have the user (card holder) sitting at an insecure PC, but, by using SETM, the key information that an attacker wants (such as card number, card PIN or biometric data) does not appear in the clear in the PC. Thus any spoof transaction generated in the PC and requiring the Smart Card's participation cannot be authorised without the card holder's explicit action at the secure sub-terminal. *Figure 1* shows the end-to-end secure messaging routes, and *Figure 2* illustrates the architecture of the secure sub-terminal, with the permitted internal data paths.

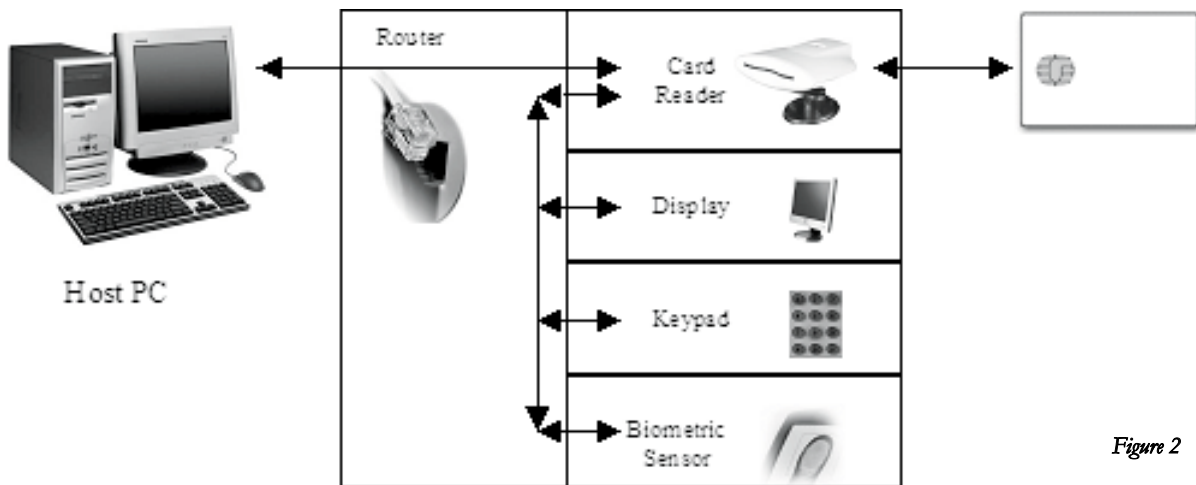
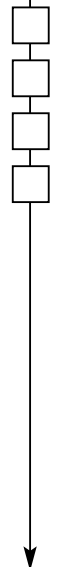


Figure 2

It is important to understand that the methods and technology introduced here are not new. In the experience of the author of this article they have been described by various people at various times during at least the last 15 years. What is relatively new is the generalisation of these methods so that they can be economically implemented over a large range of types of transaction. At the same time, specific secure application areas requiring more complex implementations (e.g. legal applications where contracts are prepared, signed and transmitted totally electronically) can be satisfied by extensions to the base-line methodology.

Part 2 of this series will apply SETM to common on-line transactions in the public sector, in banking, and in more general environments. It will also further explain the required terminal and card level requirements.





# 3GSM Swansong



By Patsy Everett, Managing Director, Smart Card News Limited



*Patsy Everett*

This year will be the last time that the 3GSM World Congress will be held in Cannes, its just got too big. The conference and exhibition will be held next year in Barcelona, a city more able to accommodate the more than 30,000 expected delegates. There is just so much news coming out of the show that this is just a snapshot of some of the announcements.

VeriSign, Inc. a provider of intelligent infrastructure services for the Internet and telecommunications networks, and Gemplus International S.A. a provider of Smart Card solutions, announced a new SIM-based authentication solution for wireless carriers. This new solution provides wireless carriers with a scalable, open standards-based strong authentication solution. The SIM-based authentication solution utilizes the VeriSign Unified Authentication platform and GemXplore 'Xpresso Java Card SIMs from Gemplus.



This joint offer is advantageous to service providers as it is quick to deploy and offers excellent time-to-market availability. There is no password to remember for the end-user, which makes it easy to use with no compromise in security.

VeriSign Unified Authentication is a single, integrated platform for provisioning and managing all types of two-factor authentication credentials. VeriSign Unified Authentication reduces the cost and complexity of strong authentication by integrating with an enterprise's existing IT infrastructure, including leading directory and application servers, thus eliminating the need for additional hardware and software on a corporate IT network.

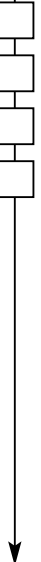
Both VeriSign and Gemplus are operating according to standards set forth by the Initiative for Open AuTHentication, (OATH). Thales, and Gemplus demonstrated a SIM/USIM-based content protection solution to deliver broadcast content on mobile devices. This solution will enable live, over-the-air broadcast content to be viewed on any mobile device on a free-to-air, subscription or pay-per-view basis, following the business models chosen by premium content aggregators and service providers. The solution was shown using content provided by the Canal+ Group



The Pay TV solution integrates Nagravision's new Nagra Mobile Content Protection System with Thales' delivery solution and Gemplus' latest SIM card family, GemXplore Generations, to secure broadcasting of content to mobile devices.

The SIM is used to decode content decryption keys regularly needed to decrypt the streamed content. This integrated solution brings together the technologies required to secure content in a hybrid 3G and DVB-H environment. Thales, as a system integrator, provides the products used to generate and broadcast DVB-H services: IP content generation and encapsulation, modulation and transmission.

Mobile users can use an SMS-based service to subscribe to specific programs or purchase the rights to view specific video-based events, such as sport matches or news. The SIM card, already used for its highly secure, authentication functionality, can also be used as an electronic wallet to purchase token-based or Pay-TV programs on a mobile device. Gemplus and Bouygues Telecom, a French mobile phone operator, are piloting the first deployment of GemXplore Generations Multimedia, the new SIM card family with memory ranging from multi-megabyte to gigabyte capacity.



CONFERENCE SPECIAL



Kodiak Networks, a provider of advanced wireless voice systems, and Gemplus announced the availability of Kodiak SIMpower on the GemXplore 'Xpresso Java card from Gemplus. This strategic partnership allows wireless operators around the world to deploy Gemplus Java Card SIMs integrating Kodiak SIMpower advanced voice services functionality, therefore increasing subscriber usage and boosting overall revenue per user.



Royal Philips Electronics and ARM announced, that the two companies have collaborated to offer a complete development kit for the Nexperia Cellular System Solution 6120. Using ARM RealView tools, the Nexperia Mobile Developer Kit (NMDK) makes integrating multimedia applications into a mobile phone simple, significantly reducing time-to-market for Philips' customers. This makes the NMDK ideal to implement applications such as the capture, playback and streaming of real-time 3GPP and MPEG-4 audio and video files, as well as additional features such as gaming, security and audio enhancements.

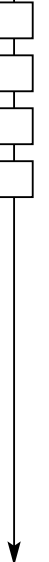


The NMDK enables developers to use the platform immediately, bringing 'plug and play' capabilities to application integration. Incorporating components such as the ARM RealView toolchain, which includes the Metrowerks' CodeWarrior Integrated Development Environment (IDE), the kit contains all the elements needed to customize and integrate multimedia applications on Philips' Nexperia Cellular System Solution 6120.

The NMDK consists of a software protocol stack, software solutions for mobile-based multimedia applications, the ARM RealView Developer Kit for Philips' Nexperia Cellular System Solution, data sheets and application notes. The kit enables writing, compilation, debugging and integration of systems for the ARM processor-based Philips solution. The Nexperia Mobile Developer Kit is available now. NDS Group plc a supplier of conditional access systems and mobile Digital Rights Management (DRM) solutions, and ARM, announced the availability of the industry's first Open Mobile Alliance (OMA) v2 compliant DRM solution based on the ARM TrustZone software API. The TrustZone software API provides a common framework for secure application developers, reducing porting costs and enabling greater compatibility across multiple platforms. The ARM TrustZone technology, which includes software co-developed with Trusted Logic, is specifically targeted at securing consumer products such as mobile phones, PDAs, set-top boxes and other systems running open Operating Systems (OS), such as Symbian OS, Linux and Windows CE.

This ensures reliable implementation of security critical applications and services such as network virus protection, VPNs and DRM. Communications, a WiMAX semiconductor company, and ARM announced that SEQUANS is collaborating with ARM to integrate the ARM ARM926EJ-S processor into its infrastructure and subscriber range of WiMAX chip sets. SEQUANS' first ARM license, which includes a full range of ARM processor technologies, will enable it to launch its WiMAX solutions in 2005, while reducing the cost to the device manufacturers. The ARM926EJ-S processor offers small code size through use of Thumb technology and high performance through advanced micro-architecture. Small code size leads directly to smaller caches and Tightly Coupled Memories (TCMs) which results in smaller die size and a reduced bill of materials during the fabrication process. This cost saving can be passed on to WiMAX original equipment manufacturers (OEMs), and in turn, help lower the price for WiMAX subscribers. In addition to the ARM926EJ-S processor, SEQUANS have also licensed the AMBA Design Kit (ADK) solution and the VFP9-S vector floating-point coprocessor. The ADK toolkit enables decrease design time and the VFP9-S coprocessor maintains the clock speed of the ARM926EJ-S processor during heavy data packet throughput. This ARM technology will be integrated into the design cycle of both SEQUANS' primary product groups: The WiNetPRO-BS; the baseband system-on-chip (SoC) solution for WiMAX base stations and the WiNetPRO-SS; the baseband SoC solution for WiMAX subscriber stations.

Secure Digital Container AG (SDC), a provider of technology for mobile music digital rights management (DRM) announced a partnership with Tao Group, a Java Virtual Machine (JVM) technology provider. SDC and Tao are combining SDC's DRM Music Player for mobile phones with Tao's binary portable Multi-Media platform 'intent', including new classes of Java to create a fully-fledged music experience for mobile phones.





The download and playback of DRM-protected music tracks requires massive resources on handsets like processor power, storage capabilities and battery power. Up to now, the only solution for mass-market devices running full-length tracks has been a native implementation of the music player, DRM Client and download manager for progressive download. This requires a huge number of different implementations on a large number of different operating systems currently in use and increases the costs for such devices. As a result, handsets currently available for full-length music services are in the highest price range.



With the combination of TAO's "intent" Java platform and SDC's Java Music Player application a fully-fledged music player solution is available on a broad range of handsets of all price groups. SDC, also announced a partnership with Shazam Entertainment. The two companies have developed a solution that will enable mobile operators to offer subscribers the ability to tag, purchase and download a track over a mobile handset in three simple steps. Users will be able to download licensed music directly to mobile phones for playback and storage, without having to know the name of the artist or title of the song.



The functionality will be integrated in the SDC Music Player for Symbian, a joint development with Musiwave based in France, and the SDC Music Player for Java. The song is tagged directly out of the player application and the information is forwarded from the Shazam Server to the carrier's mobile music shop server. The shop matches the track with the catalogue data base and present's the information with a buy button directly in the mobile phone player as a WAP page

Trolltech, a provider of technologies for Linux and cross-platform software development, announced that their Qtopia software platform for Linux-based mobile phones is available as part of the Philips Nexperia Partner Program, optimized for mobile applications. The Qtopia software platform is also included in the new Philips Nexperia Cellular System Solution 9000 reference platform for mobile smartphones and high-end feature phones. Trolltech, also announced that Ningbo Bird, the largest domestic supplier of mobile phones in China, has selected Trolltech's Qtopia as the software platform for all its Linux-based mobile phones. Ningbo Bird will launch its first handset build on Linux and Qtopia, the E899 smartphone, by mid-2005. Leadtek Research Inc., a provider of video and IP technologies, has also chosen Qtopia as the standard software platform for its next phase of Linux-based IP videophones and other devices.



Converse, a unit of Converse Technology, Inc. has announced that COSMOTE, a mobile operator in Greece, had selected Converse's Fun Dial platform to expand its Calling Tunes entertainment portal to include personalized content ring-back tones.

COSMOTE's current entertainment portal, based on Converse VoiCD, offers a comprehensive range of content applications, enabling fixed and wireless phone users to exchange music and jokes, dedicate song and MMS greetings, and download ring tones. COSMOTE is the first operator to provide ring-back tones to the Greek mobile market.

The "smart2go Personal Navigator" is the first mobile navigation system to combine satellite navigation with an extensive travel guide. At the push of a button, the Personal Navigator calculates a route, provides turn-by-turn directions, and displays a 3-D map, provided by Tele Atlas, a worldwide leader in the development of state-of-the-art geographic databases. Personal Navigator does more than quickly and clearly point out the way from A to B. It can rely on its own database, compiled by Tele Atlas, to offer users a huge list of points of interest like gas stations, banks, parking lots, etc., it presents the user with recommendations updated daily for events in culture, sports and more. Once the requested destination has been found, smart2go makes it easy to send routes by SMS or e-mail to friends. smart2go is a fully fledged satellite navigation system. smart2go uses its own maps, onboard at all times. This means an immediate response and no extra charges while plotting a route. Maps of many European countries and the United States are already available. Locations can be entered through the keypad and the resulting navigation directions are spoken loudly and clearly (available in four languages).

