

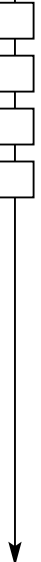


www.aciworldwide.com

ACI Worldwide

ACI have kept the front page of their website simple with very brief information, a large navigational bar and a news feed informing the visitor of latest press releases about ACI. The trends section on the site provides the visitor with very in-depth articles into the e-payment landscape and has a specialist section on EMV Smart Cards which is very informative. The website itself employs very little graphical content and relies on text based information which is used to great effect. The website's large navigation bar makes moving around the site easy and allows the visitor to access information quickly. Overall this website is excellent but it is let down by its very dull, limited appearance.

Navigation
Content
Appearance



Smart Card on the Web



www.sony.net/products/felica

Sony Felica

Sony's website gives a very good overview of the Felica IC card using comical visual's to represent its uses. This effective mix of graphical content is merged with highly informative text, giving the site a very efficient balance. The website provides the visitor with a catalogue of useful PDF downloads relating to the product. Again this information breaks down the information making it easy to understand. Navigation around the site is simple with sub navigational bars appearing within each section. Overall the website's simplistic approach to its information sources and its use of pastel colours give it a very good visual feel. The site is also available in Japanese

Navigation
Content
Appearance



www.omniperception.com

OmniPerception

OmniPerception's website is very basic and the information on the site is also very limited with little textual or graphical content. For example they do not supply any information about their actual products for the visitor to browse. They run a partnership programme but do not supply any information relating to it or its benefits. Moving around the site is quick but there is no real obvious homepage button on the navigational bar, which results in the user clicking on the back arrow in an attempt to get back to the front screen. Overall the site lacks any muscle and does not really hold any real advantages for visitors trying to find out about OmniPerception and its related services.

Navigation
Content
Appearance



US-VISIT Program Enhances Security

The U.S. Department of Homeland Security has launched US-VISIT, a new program to enhance the nation's security while facilitating legitimate travel and trade through their borders. New entry procedures took effect on the 5th January 2004 for most foreign visitors with non-immigrant visas at 115 airports and cruise ship terminals at 14 seaports. The system utilizes biometrics, which are physical characteristics unique to each individual, to verify identity. Biometric technologies are the basis of an extensive array of highly secure identification and personal verification solutions. "US-VISIT is an important new element in the global war against terrorism and will serve as a catalyst in the growing international use of biometrics to expedite processing of travelers. We want to show the world that we can keep our borders open and our nation secure." said Tom Ridge, Secretary of the Department of Homeland Security.

US-VISIT requires that most foreign visitors traveling to the U.S. on a visa have their two index fingers scanned and a digital photograph taken to verify their identity at the port of entry. The US-VISIT program will enhance the security of U.S. citizens and visitors by verifying the identity of visitors with visas. At the same time, it facilitates legitimate travel and trade by leveraging technology and the evolving use of biometrics to expedite processing at their borders. "This type of identity verification helps our Customs and Border Protection Officers make better admissibility decisions and enhances the overall integrity of our immigration system." said Asa Hutchinson, Under Secretary of Border and Transportation Security of the Department of Homeland Security. The Department of Homeland Security has been testing the new entry procedures since November 17 at Hartsfield-Jackson Atlanta International Airport. The test showed that the new procedures add an average of 15 seconds to the entry process at primary inspection for foreign nationals traveling with visas. More than 20,000 passengers from Central and South America, Europe, Asia and South Africa participated in the voluntary test, which confirmed the program's ability to verify identity without adding significant time to the process.

The Department of Homeland Security has also begun a pilot test of exit procedures for departing passengers holding visas. A departure confirmation program using automated kiosks is being tested at Baltimore-Washington International Airport and at selected Miami Seaport cruise line terminals. Foreign visitors exiting the United States from those locations will be required to confirm their departure at the kiosk. US-VISIT officials will evaluate the tests and consider alternatives to the automated kiosks for departure confirmation throughout 2004. Congress has mandated that an automated entry-exit program be implemented at the 50 busiest land ports of entry by December 31, 2004, and at all land ports by December 31, 2005. A Request for Proposal (RFP) was issued in November to engage the private sector to help the US-VISIT program develop the optimum solutions for entry and exit processing. The contract will be awarded in May 2004.

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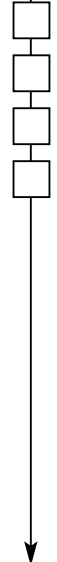
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LEAD STORY



Thailand to Produce Smart Cards

The Thailand Science and Technology Ministry is seeking cabinet approval for one billion baht to enable Thailand to produce its own Smart Cards for the country's national ID programme instead of relying on imports which cost more. Foreign microchips cost around 100 baht each compared to domestically produced ones that would cost between 65 and 72 baht.

Asian Agreement on Single Card

The Korea Electronic Payment Forum (KEPF) has announced that representatives from the Smart Card industries in Korea, China and Japan have agreed to develop and promote the adoption of a single Smart Card in Asia. Initially the Forum plans to introduce a contactless electronic passport card, called the Silk Road Card, to speed up incoming and outgoing procedures for travellers and foreign residents.

ACT ITSO-based Solutions

Applied Card Technologies (ACT) has announced that its Smart Card systems product portfolio is now based on ITSO, the Integrated Transport Smartcard Organisation consisting of bus and train operators and non-metropolitan authorities involved in creating a common standard specification to enable interoperable Smart Cards.

Chris Forrester, ITSO Product Leader at ACT, explained: "We are a member of ITSO and have been participating in its suppliers group - the Inter Industry Forum to help develop equipment and systems to the ITSO specification. We are pleased to have been involved in the creation of the final version and now have a range of ITSO-based applications. The opportunity to provide customers with a multi-application card that is interoperable and ITSO-based in the transport and non-transport areas puts us in a very strong position."

Second ORGA Tachograph Order

The Swedish motor vehicle authority Swedish National Road Administration SNRA VÄGVERKET has awarded a contract to ORGA Kartensysteme for Smart Cards to be used for all digital tachographs on trucks and buses in Sweden. Shipments will begin in the 2nd quarter of 2004. ORGA has already won a tachograph card order from the UK. ORGA will

act as general contractor, supplying pre-personalised tachograph cards to VÄGVERKET. The order includes embedding the tachograph module in the card body, personalisation of the tachograph cards, including the tachograph application developed by ORGA, and secure shipment of the cards to Sweden.

The highly secure polycarbonate card body is being procured from Austria Card. Austria Card, a subsidiary of the Austrian national bank OeNB based in Vienna. The company is regarded as a specialist for polycarbonate ID cards and produces the national ID card for the Republic of Austria. An EU directive mandates that all new trucks and buses must be equipped with the digital tachograph by August of this year.

Pointsec 1.2m Euro Contract

AstraZeneca, a leading pharmaceutical company, has awarded Pointsec Mobile Technologies a 1.2 million euro global contract in license fees to secure their mobile devices with a comprehensive access control and encryption solution to ensure only authorised users gain access to data held on their PCs, laptops, PDAs and smartphones.

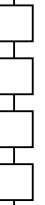
LaserCards for Italian ID

Drexler Technology Corporation has received an order valued at \$3.8 million for LaserCard optical memory cards for use as Italy's new national ID card, called the Carta d'Identita Elettronica (CIE). Deliveries are scheduled to be completed by June 2004.

The national ID card will be distributed in phases, starting with 56 cities in 2004, according to Italian government sources. Developed in close cooperation with various agencies of the Italian government, the CIE card is a specialised LaserCard optical memory card which contains a one megabyte optical memory stripe for security and is designed so that the Italian government can add an IC chip currently supplied by Siemens.

China Introduces ID Card

The Chinese Ministry of Public Security has announced that from the end of 2004, Chinese citizens will be carrying a new, second-generation Smart Card-based ID card holding personal information on the embedded chip.





This new ID Card will replace the existing paper cards held by over 900 million residents throughout the country. The roll-out of the new cards will be concluded at the end of 2008. Trials are planned in major cities like Beijing, Shanghai and the southern city of Shenzhen.

ID for Baghdad Airport

Accurate-USA/Photobadge, a provider of specialist ID solutions, is sending identity card design and printing solutions, based on Sabadille Systems Card-Focus ID software, for deployment at Baghdad International Airport in Iraq. They have teamed up with Toifor, an organisation supplying support services to American troops in Baghdad helping in the reconstruction of Iraq.

Oman National ID Card

Oman is the first Arab country to introduce a machine-readable Smart Card with thumbprint biometric information as a personal identity card. The card will contain the holder's civil number, civil register data, passport number, address and driving licence. The card is compulsory for citizens older than 15 years and residents working in the public and private sectors and their family members above 15 years of age. The Smart Card will be read on entering or leaving the country.

UK National Database

Plans to set-up a national computer register of the UK's entire population have been announced by the Home Office. The current population is around 58 million and the intention is to log details of each person, including biometric identifiers such as fingerprints and iris scans, on a central computer and issuing them with a unique identifying number. The introduction of a national database will bring a national ID card in the UK a step closer

Japan Airlines to Test ID Card

Japan Airlines are to trial a Smart Card ID using iris and other facial recognition biometrics with passengers flying between Tokyo and Seoul. The trial will take place at Tokyo's Narita airport. The cards will be used for passengers checking in at Narita or Incheon International and for negotiating security checks.

New Software for CAC Card

The US Department of Defense is to introduce a new software applet to their Common Access Card (CAC) to increase the ways users can be identified. Currently the card stores only personal identification numbers and a set of access controls, such as passwords, tokens or biometrics. The new applet, written by ActivCard, has been designed to save space on the 32K of memory currently on the chip and will allow applet developers to use multiple forms of authorisation. The software is undergoing certification for the Federal Information Processing Standards.

RFID Test Centre

Sun Microsystems has announced plans to open a radio frequency identification (RFID) test centre in Scotland, UK.

Norwegian License for Proton

STMicroelectronics has signed an agreement for the deployment of its Proton Prisma Smart Card system software technology in Norway with BBS (Bankenes BetalingsSentral AS). BBS is owned by and acts on behalf of the Norwegian banks - Den norske Bank, Sparebanken 1 Gruppen, Gjensidige NOR Sparebank and Terra Gruppen. The cards that will be used in the first phase will be the Proton Prisma BP (basic profile), on which the Visa and MasterCard EMV application will co-exist with the Norwegian domestic debit Bank-Axcept.

EMV Migration in Kazakhstan

Kazakhstan's Kazkommertsbank (KKB) has completed the migration of its 200,000 bank cards to EMV (E u r o p a y / M a s t e r C a r d / V i s a) specifications. KKB is one of the most prominent

For more information visit ...



Applied Card Technologies

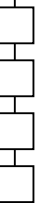
www.card.co.uk

ORGA

www.orga.com

Oberthur Card Systems

www.oberthurusa.com





banks in the Commonwealth of Independent States (CIS), which includes Armenia, Azerbaijan, Belarus, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan and Kazakhstan.

Microcontrollers for PayPass

Atmel Corporation and On Track Innovations have announced that their contactless secure microcontroller solution has been selected by MasterCard International for use in its MasterCard PayPass deployments in the US. The chip features 40Kb ROM, 2Kb EEPROM, hardware DES and is compliant with ISO-14443B and ISO-7816 industry standards. Atmel and OTI provide the chip in both a contactless module form and in an inlay form, providing easy card embedding for card suppliers.

Consortium Announces Release of MULTOS step/one Specification

MULTOS Consortium members now have access to the MULTOS step/one specifications for implementation. The Specifications consist of two parts; an on-card specification defining application establishment, the API and security targets; an off-card element defining key generation and management processes, load and delete protocols and certificate formats. MULTOS step/one exploits much of the security, flexibility and software interoperability of the original MULTOS platform, and affords issuers better choice and control by allowing them to individually manage vendors across the supply chain - from operating system implementers to card personalisation bureau. First silicon is expected in the first half of 2004.

NFC Technology Development

Philips Semiconductors and Sony Corporation have announced the development of technology to enable a new kind of contactless payment. Called Near Field Communication, the new technology has a much shorter range (4 inches) and does not require secured pairings like Bluetooth devices. The two companies have teamed up with Visa for payment processing and security issues.

3G Phone with Hybrid Card

A 3G CDMA 1X mobile phone handset incorporating a removable contact/contactless IC card with

dual interface has been announced by KDDI Corporation and Hitachi. The card utilises an interface that is transport systems in Japan as a means of passing through the ticket gates. When the interface is implemented users will be able to integrate rail/transport and other applications including electronic money, tickets and memberships on a single card.

Biometric Solution Record?

Bartronics India is seeking an entry in the Guinness Book of Records with their claim that they are the provider of the world's largest biometric solution at a single location. The company provides a total of 18 fingerprint scanners at Triumala Tirupati Devasthanams (TTD), a conglomerate of 12 temples and sub-shrines spread across a complex in Andhra Pradesh, India. The temples receive an average of 45,000 pilgrims from India and internationally every day, with the numbers reaching up to 150,000 on some festival days.

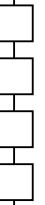
Two of the fingerprint scanners are for verification access into Triumala itself with the remainder at pilgrim enrolment centers at TTD offices in several major cities across India. Pilgrims currently register for bar-coded tags. The fingerprint registration is being piloted with pilgrims who enrol for certain pujas and sevas, Hindu religious rituals.

SAFLINK Adds to Portfolio

Biometric security solutions provider, SAFLINK Corporation, has entered into an agreement with Information Systems Support (ISS) and BioMetric Solutions Group (BSG) to acquire intellectual property and certain other assets related to digital identity and biometric-enhanced physical access security technology.

BIO-key/ClassifEye in JV

BIO-key International, a provider of finger-based biometric identification, has formed a joint venture with ClassifEye, a developer of biometric security and access solutions, to compress its flagship biometric identity algorithms into embedded security solutions running on mobile and wireless devices. BIO-key's Vector Segment Technology (VST) software will enable biometric technology to be utilised by standalone mobile devices such as cell phones, PDAs, tablets and other portable computing products.





Fingerprint Technology Order

Identix has been awarded a Blanket Purchase Agreement (BPA) from the Pennsylvania Chiefs of Police Association (PCPA) to provide TouchPrint 3000 ten-print live scan systems - including the live scan industry's only full hand scanner - to replace, upgrade and add to the more than 100 live scan systems currently deployed throughout Pennsylvania, USA. The BPA is for a one-year period, with two one-year options that may be exercised by the mutual agreement of Identix and PCPA.

Biometric Test Results

The International Biometric Group has announced the commercial availability of the results from Round Five of their Comparative Biometric Testing (CBT) project. The test, sponsored by Honeywell, Microsoft, and the Financial Services Technology Consortium, evaluated the effectiveness of biometric information such as fingerprint, facial recognition, iris recognition and hand geometry systems offered by a selected number of vendors. The aim of the test was to measure a systems' ability to enhance security in real-world applications such as border management, air travel and logical access.

Travel Cards to Merge

Japanese railways have announced plans to integrate their separate Smart Card ticketing systems. East Japan Railway Co. (JR East), serving Tokyo and eight prefectures, operates the Suica card and West Japan Railway Co. (JR West), in Osaka, Kyoto and four other prefectures in the Kansai region, uses the Icosa card. The two travel cards will be merged after tests are carried out later in the year.

One-Ticket-To-Ride

A one-ticket-to-ride public transit fare collection ticketing and revenue management system from Cubic Transportation Systems, is now in operation on the Port Authority of New York & New Jersey's AirTrain JFK light rail airport access system to the John F Kennedy International Airport. The new equipment, including Smart Card-compatible turnstiles, is interoperable with the Cubic-developed MetroCard system, allowing AirTrain JFK customers to seamlessly transfer at the two rail stations that serve as hubs to destinations throughout the five boroughs and Long Island.

Smart Travel Could Cost More

Transport for London has admitted that passengers who wrongly use the new pre-paid Oyster Smart Card for travel could pay up to three times the standard fare price. The concept of the Oyster card is that passengers hold the Smart travelcard against a scanner both on entry and exit to the system.

However, concerns have been raised not only because misuse could result in passengers paying more but also because some train stations in London, like those on the Docklands Light Railway, do not have barriers

EasyCard Tampering Inquiry

Taipei Rapid Transit Corporation, says that employees who allegedly manipulated features of the company's EasyCard design to erase records of trips taken enabling them to travel free, could all be sacked if the allegations are proved. EasyCard is a Smart Card-based ticketing system for the Taipei Metro Rapid Transit network, buses and car parks. Each card can only be used by a single passenger. When the passenger leaves through the gate, the sensor detects the EasyCard and the trip's value is deducted.

VP for Applied DNA Sciences

Applied DNA Sciences, a provider of proprietary DNA-embedded security applications, has announced the appointment of Ralph Brier as Vice President of Sales and Marketing. Previously he was with Sagem Morpho, a division of Groupe Sagem, a provider of biometric solutions for business and government.

For more information visit ...



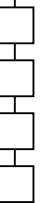
Atmel
www.atmel.com

On Track Innovations Ltd
www.otiglobal.com

MULTOS
www.multos.com

SAFLINK Corporation
www.saflink.com

Cubic Transportation Systems
www.cubic.com





Changes at Gemplus

Gemplus International has announced changes in its internal organisation in order to adapt to evolving market conditions and to better serve its customers. The Financial and Security Services Business Unit is being run jointly by Philippe Combes and Jacques Seneca. They will continue in their existing duties as, respectively, Executive Vice-President, Operations, and Executive Vice-President, Business Development Group. The former Executive Vice-President of the FSS Business Unit, Gilles Michel, will leave the company to pursue other interests. The Board of Gemplus International also announced the appointment of Werner Karl Koepf and Geoffrey D Fink as Directors, replacing Kheng Nam Lee and Abel G Halpern who resigned. Koepf currently holds various senior management positions at Marconi Corporation, London, UK and Fink is a London-based Principal in Texas Pacific Group's operating group.

Oberthur Introduces The Moneytic EMV Chrysalis

Oberthur Card Systems has announced the development of a completely new line of payment products named "MoneytIC EMV Chrysalis", in order to address new market requirements. Based on the latest EMV, VISA and MasterCard specifications with the up to date security standards, MoneytIC EMV Chrysalis is a Smart Card in which any of the debit/credit applications available can be activated during the manufacturing phase. An additional flexible file system allows many value added applications to coexist on the same 'device'. The issuer of EMV Chrysalis Smart Cards and their customers can benefit from many new applications: e-payment on 3D-Secure infrastructure, secured home banking, data storage which can, among others, be used for loyalty application. Due to the native technology, EMV Chrysalis offers the highest level transactions performance and memory optimisation.

RFID Tagging of Casino Chips

A scheme in Australia to embed radio frequency identification (RFID) tags into casino chips has been developed in Australia to enable casinos to fight counterfeiting and to monitor the behaviour of gamblers. This new development could help to beat the large-scale counterfeiting of currencies by implementing the tags into banknotes, making them trace-

able. However, there would be strong opposition from human rights and privacy bodies if an individual's spending could be traced even when using cash.

Ireland Seeks EU Health Smart Card

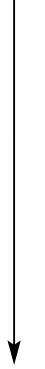
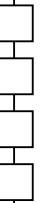
The Irish Government in its new role as president of the EU, has announced its intentions to introduce a computerised European health services Smart Card. The card is to replace the existing medical forms (E111) issued to people travelling within the EU and will also carry extra personal information than currently available. The Irish health minister Michael Martin wants these cards to be available to all EU residents from June 2004.

New Report Reveals Wide-Ranging Opportunities for Smart Cards in the Healthcare Market

HBS Consulting, a provider of Healthcare Consulting, has released a strategic publication into the wealth of opportunities in the Healthcare Market for Smart Cards. It reveals that more than two-thirds of the schemes planned for Europe in the next five years do not yet have defined suppliers - and highlights which. Against a background where the use of IT has become ubiquitous in all areas of healthcare, from medical records to patient management, Smart Cards have rapidly emerged as a key component of the system.

These cards, combining both storage and processing capability, can be used for storing medical data, proving entitlement to services and giving access to healthcare networks. Extensive research by HBS Consulting shows that while data storage was originally assumed to be the major opportunity in the healthcare market, in fact proof of entitlement has become the dominant role for Smart Cards in Europe. This latest strategic review from HBS Consulting places information about health cards within the overall context of Smart Card activity in Europe and of general trends within healthcare provision in Europe. Thanks to extensive primary research it features in depth information about specific schemes from their operators and it comments on specific trends within the industry, often from the point of view of existing suppliers.

A free Executive Summary of the Strategic Review is available from HBS Consulting (www.hbs-consulting.com).





Technology Not An Obstacle For UK Smart ID Cards



By Caroline Walpole and Pieter Hoogendoorn, ACI Worldwide Limited



ACI at CarteS 2003

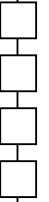
The introduction of Smart ID Cards in the UK has long been a controversial topic, but the arguments against it are being gradually worn down by the increasingly apparent benefits. Political will and public assurances of privacy remain the only obstacles, particularly as the technology to support such a large undertaking already exists and has been proven in many contexts. The UK government has already taken its first steps towards implementing a smart ID card scheme. A six-month trial run by the UK Passport Service (UKPS) will involve 10,000 volunteers, each receiving a personalised Smart Card carrying both printed and electronic information. Similar cards have already been introduced to speed claim processing and reduce fraud among asylum seekers.

Most recently, we have seen the US Immigration Department announce the requirement that visitors traveling under the visa waiver scheme will require passports that hold biometric data such as digital images or fingerprints. UK passport offices intend to begin issuing such passports in 2005, and there is no reason why this capability should not be extended to the smart ID environment. Indeed, this is already occurring in some national schemes.

There are many other applications in the public and private sectors - including benefits agencies and health-care - where such cards might be useful, and the Office of the e-Envoy has rightly called for co-ordination among organisations at both the central and local government levels. Multi-application card technology is the best way to ensure people aren't forced to carry a wallet full of similar cards for different purposes. The best way to ensure mass adoption of the cards both among individuals and the organisations that hope to make use of them, is to start with a core purpose for the card, to which other applications can be later added. In most other countries that have adopted Smart Cards at a national level, it is the ID card functionality that serves as the common platform. The smart identity card system (SMARTICS) in Hong Kong is a good example of how different types of technology in the market today can be used to overcome the challenges of such large, complex projects. It also shows that the technology exists to counter arguments about the security and privacy aspects of such cards.

Single Card, Many Applications

The Hong Kong government was faced with replacing an existing laminated paper ID scheme, but decided that a better option was to provide a technology platform based on Smart Cards. This should be not only for secure ID, but also for other applications on the smart card that can be deployed at the discretion of the card holder. Library card services and digital certificates are available today in Hong Kong, and driving license functions and e-payment facilities are among other possibilities going forward. A consortium of companies, of which ACI Worldwide was one, was assembled to deliver the project, which went live in June 2003. The consortium was necessary because of the range of infrastructure required by such a complex project. At the front end are the physical cards and terminals themselves, and the software that resides on each. These rely on a robust telecom network to ensure connectivity. And at the back end there is a requirement for systems that handle initial card issuing and personalisation, interfaces with existing databases, card and application lifecycle management, and post-issuance card updates.





These latter requirements are perhaps the most crucial to the success of the project. Even for government organisations that already issue cards of some type tied to electronic records, the Smart Card will introduce the need for new processes and functionality. These needs will be different for the card issuer and organisations that are permitted to use the real-estate on the card for their own applications. In the Hong Kong example, the Immigration Department is responsible for issuing the cards, and is using ACI's technology in the process of data preparation and card personalisation. This software supports the gathering and enrichment of data for each individual card, including encryption, loading and initialisation. The Immigration Department is also using complementary technology to support the lifecycle of the applications that reside on both the cards and the terminals that read them. This includes any updates to the existing data and application, or even new applications that the department wishes to introduce. Any other government body, such as the Transport Department, can also be supported by this software that enables the secure download of applications or the replacement of existing applications with newer versions.

Whenever multiple data sets and applications reside on a single card, the question of security becomes even more important. In Hong Kong the decision was made to base the card on the Multos operating system, which is the most secure platform available today. It incorporates the highest levels of key management and security functions and has been awarded ITSEC 6 categorisation - the highest security level awarded by the US government. Further protection is provided by the fact that terminals must have the correct software in place to access particular data. So, for example, a terminal in a police station might be able to access the ID and driving license data on the card, but not the cardholder's medical records. Issuing bodies can exercise their role and control the relevant parts of the data and processes, without clashing with other entities sharing the real estate on the Smart Card.

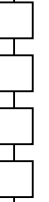
Implications for the UK

Since June 2003, Hong Kong has gradually ramped up the issuance of new Smart Cards to 8,000 a day and expects to have the entire population - close to seven million - covered by July 2007. For the UK's larger population it would be a simple matter to scale up the technology being used in Hong Kong to complete a roll-out over a similar several-year time frame. ACI's Smart Chip Manager infrastructure runs on proven, enterprise standard technology, including products from the world's leading database, server and terminal hardware vendors. The speed of implementation of a national Smart Card scheme in the UK would only depend on the number of centres that are set up to handle issuance. There would need to be a central control point with a database holding all the basic information per card holder. But the actual issuance could be done in a distributed manner - perhaps through passport offices, which already have identity verification processes in place that could easily be adapted to a Smart Card environment. Introducing a Smart ID Card scheme into the UK is an ambitious undertaking, but there are also enormous benefits to be had. Using technology that is already available today it is possible to provide multiple government bodies, working in co-operation, with a single platform that can streamline their operations and reduce fraud. This same technology can also manage the data and applications on cards and terminals in a way that ensures privacy and security for the cardholder.

www.aciworldwide.com

* **Pieter Hoogendoorn, Director Business Development:** Pieter joined ACI Worldwide in 2000 and is responsible for business development in the smart card issuing and management arena. From 1998 until 2000, Pieter was responsible for the set-up and operation of the marketing and sales division of Chipper International. In April 2000, ACI Worldwide acquired Chipper International. Pieter has been deeply involved in various large-scale smart card deployments, such as the Chipper multi-function Smart Card scheme in the Netherlands, Telstra's Smart Card in Australia and recently the Hong Kong Smart ID card scheme (SMARTICS).

* **Caroline Walpole, Senior Business Consultant:** Caroline joined ACI Worldwide in 1993 and has since been involved in managing products and solutions that address the "back-end" processing aspects of the payments business including card issuance, merchant management, fraud detection and risk management. In 1999, Caroline was responsible for establishing and managing the 'FastStart for Visa Members' programme in EMEA. This programme provided a suite of solutions and consultancy for banks wishing to be early adopters of EMV.





Smart Card Industry Review 2003

By Jack Smith, Editor, Smart Card News



The start of a new year is a good time to look at what has been happening in the industry, for example, in the last 12 months there have been many takeovers and several joint ventures.

Acquisitions: Datacard Group completed the acquisition of assets from Gilles Leroux, the French manufacturer of plastic card production, control and personalisation systems. Semiconductor manufacturer ST Microelectronics acquired Belgium-based Proton World International, which pioneered the Proton electronic purse, from the ERG Group. ST also acquired from the IPM Group the business and assets of Italian Smart Card manufacturer Incard. Alpha Virtual, an Internet software company, acquired the key assets of fingerprint biometrics technology company Veridicom.

ACG Advanced Component Group took over Danish software company Logos Smart Card and sold Ned-Card in a Management Buy Out to the founder, Ben Slager, and a Dutch institutional investment group. Schlumberger sold the majority of SchlumbergerSema businesses in a \$1.5 billion deal to Atos Origin. Sagem sold the 10% stake in Smart Card producer Gemplus which it acquired for about 50 million euros from Gemplus founder Marc Lassus. Two leaders in facial recognition technology announced plans to merge. Viisage Technology of the US said it would acquire ZN Vision Technologies, based in Bochum, Germany. GW Card Holding, a sister company of GHP Holding, acquired the ORGA Group of Paderborn, including its system house, from the authentos group. The Bank of Finland announced its intention to sell its 40% stake in Smart Card manufacturer Setec Oy to CapMan.

Name Changes: Schlumberger Smart Cards and Terminals, a division of Schlumberger, changed its name to Axalto to bring more visibility and reinforce the company image as a Smart Card player in a rapidly evolving market.

Joint Ventures: Banksys (Belgium), Interpay (The Netherlands) and SSB (Società per I Servizi Bancari) formed a joint venture called SiNSYS headquartered in Brussels to offer secure, high-quality performance acquiring and issuing processing services. Hitachi and Mitsubishi Electronics Corporation launched a joint venture under the name Renesas Technology Europe to produce key products such as microcontrollers, including Smart Card ICs; flash memory technologies; and mixed signal devices.

A joint venture for the assembly and testing of memory ICs in China was announced by Infineon Technologies and the China-Singapore Suzhou Industrial Park Venture Co. (CSVC) with volume production scheduled for early 2005 and a maximum capacity of one billion chips a year. The new company is called Infineon Technologies Suzhou Co. Infineon holds 72.5% of the shares and CSVC 27.5%.

Smart Cards and Chips: Looking at the technology, new Smart Card ICs have become more powerful and more versatile as the demand for increased performance and multi-functionality grows. The industry has been quick to respond. Nippon Telegraph and Telephone Corporation (NTT) announced the development of a multi-application Smart Card complying with GlobalPlatform V2.1 specifications and offering the largest memory capacity (1Mb) for this type of card. Atmel Corporation announced the sampling a secureAVRT RISC microcontroller with 32Mega?bit Flash. It is based on the AT90SC3232CS (secureAVR processor, 32K bytes Flash, 32K bytes EEPROM) with an additional 32Mega?bit of Flash. Samsung Electronics introduced its S3CC9ED electronics for the 3G wireless communications market.





A new 1Mb SuperSIM card was developed for TIM (Telecom Italia Group) the leading Italian mobile operator, by Oberthur Card Systems and chip manufacturer STMicroelectronics for the 3G wireless communications market. The new card, called SIMphonIC 3G MEGA, contains a state-of-the-art silicon chip, called ST22FJ1M, made by ST, which includes ST's proprietary Smart Java-accelerated 32-bit processor and a megabyte of embedded Flash memory (enough to hold hundreds of JPG image files) and embedded Operating System (OS) software developed by Oberthur Card Systems. Royal Philips Electronics unveiled a high-security 32-bit Smart Card controller chip based on standard core architecture, and offering more than 650K byte of non-volatile memory. This large memory size is needed for multi-application Smart Cards such as those used in 2.5 and 3G mobile telephony and e-government. The HiPerSmart P9SC648 is equipped with 512K byte Flash, 142K byte EEPROM and 16K byte RAM and will be available in Q1 2004. Schlumberger reported orders in excess of one million for its Usimera 3G-ready 128K SIM cards.

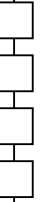
Other developments: ORGA Kartensysteme won an order from Security Printing Systems Limited (SPSL) for at least two million tachograph cards. An EU directive mandates that all new trucks and buses must be equipped with a digital tachograph by August of this year. A trial programme using Smart Cards to test facial, iris and fingerprint recognition of individuals is to be conducted by the UK Passport Service (UKPS) - a move seen as a forerunner for a national ID scheme. In the healthcare field, ORGA Kartensysteme and BMI Business Consulting Services (BCS) received a planning order for nationwide implementation of electronic prescription and electronic doctors' notes services in Germany. Fraud on UK-issued debit and credit cards reached £411.6 million in the year ended 30 June, according to the Association of Payment Clearing Services' (APACS) Card Watch.

Counterfeit card fraud topped the list at £128.8 million. Contactless technology, once regarded as only useful for public transport applications and access control, has now moved into the finance industry with MasterCard trialling its contactless payment card PayPass, and American Express piloting its contactless Express-Pay key fob developed in conjunction with Texas Instruments RFID Systems. There is also growing interest in the use of SIM cards in mobile phones for payment transactions. And just to show that there is still a market for low cost memory cards, Gemplus announced the delivery of its third billionth phone card (to Telmex, Mexico) for the public telephony sector.

Industry in figures: Looking back over the year 2003 there is no doubt that ID has been the hot topic worldwide and that this is where the main market for Smart Cards - in many cases combined with biometric technology for secure identification - will be found in the future. Post 9/11, the number of government-sponsored ID projects has spiralled - from military ID cards in the United States to national ID cards in several Middle Eastern countries to health cards in Taiwan and driver's licenses in India. In Malaysia, the MyKad project has potentially 23 million users, while the Belgian Personal Identity Card (BelPIC) is the first large-scale deployment of Smart ID cards in Europe. Smart Card ticketing system for public transport has also come to the fore with major contracts including a US \$95 million contract for Cubic Transportation Systems and its Australian subsidiary with the Queensland Government. Cubic also won a \$72.5 million contract from the Metropolitan Atlanta Rapid Transit Authority (MARTA) for a multi-modal fare collection and revenue management system.

Trans Link Systems selected The East-West Consortium, led by Thales, Accenture and Vialis, to design, develop and implement a unified electronic ticketing system in The Netherlands at a cost of 120 million euros. In Sweden, ERG Group signed a contract with Stockholm's public transport authority to implement their travel card project. Ascom Monétel, of France won a Canadian \$66 million contract to set up the fare collection system for the mass transit networks of Greater Montreal and the city of Quebec, and an 50 million euros contract from the French National Railways (SNCF) for access control equipment for an automatic fare collection system in the Paris region. The transition from magnetic stripe cards to chip cards in the financial sector has led to large orders for the major Smart Card suppliers and also for terminal manufacturers like Ingenico, Hypercom Corporation and VeriFone.

Finally latest research predicts that the world market for biometrics will grow dramatically and pass \$1 billion in three years and reach \$1.8 billion by 2010.





The Implications of the US-VISIT Program in Airport Security

By David McIntosh, CEO, OmniPerception



David McIntosh

The US-VISIT programme is part of a worldwide trend towards tightened security. The phenomenon is not new but has been given heightened urgency by the unspeakable events of September 11th 2001 and more recently by the Bali bombing and other tragedies. The effect has been to force national security agendas into a new perspective and mobilise a global process of significant social readjustment. Naturally, travel is a concern and a critical focal point for preventative measures.

The goal of US-VISIT is "to enhance the security of U.S. citizens and visitors, expedite legitimate travel and trade, ensure the integrity of the immigration system, and safeguard visitors' personal privacy." [Asa Hutchinson, Under Secretary of Border & Transportation Security of the Department of Homeland Security, 10.28.'03.]

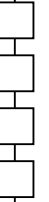
The aim is to achieve these objectives with only a few seconds delay in traveller processing. The challenges associated with this are obvious; as is the need for new technological capabilities to help overcome them. Current programmes use "biometric identifiers" - principally fingerprint scans and digital photographs. The technology to underpin such methods has been in development for many years. Thousands of man-years of R&D have gone into bringing the earliest biometric technologies such as fingerprinting to the level of accuracy they deliver today; and also into the development of the new biometric solutions required to complete the job.

It seems widely accepted nevertheless that the technology necessary to provide all the solutions is still not quite ready. In the case of US-VISIT for instance, the facial element is not yet "biometric" at all. The Smart Card element of current machine readable travel documents contains a digital photograph and not a biometric template. To be checked, a photograph needs to be looked at. For the present it is still the Mark1 Human Eyeball that does the job.

These early "biometric" systems will form the spring-board from which comprehensive biometric systems will arise, but they are not there yet. In the meantime, those of us who develop and supply the necessary technology are called upon to achieve two key goals: First, the accuracy, reliability, convenience and cost-effectiveness of the new systems we deliver today must be significantly better than the old manual/visual methods; secondly, we must provide a smooth up-grade path to further improvements in these parameters and to further automation; using more advanced new technology over the months and years ahead.

The point of comparison for the first goal is a system reliant upon individual staff required to work at a high level of alertness over long hours on duty, often under great pressure, with very little help from any automatic equipment at all. Compared with this familiar scenario, even the primitive early stages of US-VISIT constitute an enormous advance in the likely accuracy, reliability and effective level of vigilance at points of entry and exit to the country. Of course, alert individual members of staff will continue to play an important part.

The key difference will be in the contribution made by the improved tools that they have at their disposal; the increased level of confidence this provides, the reduced pressure on each individual's attention span and the better use that can be made of his or her time.





Though there are recognised drawbacks to using fingerprints as the sole ID measure; and while scanned photographs are unlikely in themselves to provide any better identification than the old celluloid photographs; nevertheless, the combination of the two, together with a generally heightened level of vigilance in the system as a whole, should create a significant performance improvement as compared with what has gone before.

The really exciting developments, however, are still to come. The key element is a machine readable travel document with a really smart Smart Card inside it. It will be equipped with a built-in FacialPIN. It will know who its rightful owner is and what they look like, and will also be able to process its own identification decisions. The 21st Century smart passport will automatically raise the alarm when carried by anyone other than its rightful owner. It will not of course solve more than one small part of the world's travel security problems but it will be a step change in the accuracy and reliability of the personal identification element.

These new capabilities are based on two main planks of new technology:

- ❑ Greatly increased Smart Card capacity, both for storage and processing; and
- ❑ New approaches to the core problems of automatic face recognition, built into tailor-made algorithms that out perform anything that has gone before.

Demonstrated by Sharp Electronics and OmniPerception Limited at Biometrics 2003 in London and at Cartes 2003 in Paris, products based on this new technology are now being rolled out - for applications as diverse as Internet banking, service personalisation and border control. Sharp's unique 1Mg Smart Card and Omni's "Affinity" face recognition technology make a powerful combination that is set to revolutionise this area of ID and travel security.

For the early adopters currently without a fully biometric solution, the up-grade path must be readily accessible at minimum disruption and cost. Later waves of US-VISIT style programmes will be able to skip phase one and move directly to the deployment of FacialPINs in passports and/or visas as a matter of course. In the meantime, digital images prepared with automatic facial recognition in mind will lend themselves to off-line automatic analysis at points of entry and/or departure; creating an eminently workable "half way house" as biometric implementation gains momentum. The really smart passport is just around the corner.

Events Diary 2004

February

- 17 - 18 Multi Channel Retail Show 2004
- 23 - 27 13th Annual RSA Conference 2004, Moscone Center, San Francisco, USA
Website: <http://www.rsaconference.com>

March

- 9 - 10 *Alliance's "Smart Cards in Government - 2004"*
Hilton Crystal City, Crystal City, USA

- 21 - 25 *APEA Fare Collection Conference*
New York, USA

- 21 - 25 *SIM 2004*
Hilton Amsterdam, The Netherlands

- 20 - April 1 *ISC West Conference*
Las Vegas, USA

- 30 - April 1 *ASIS Emerging Trends in Security Conference*
Renaissance Hotel, Chicago, USA





Envoys and 'e'

By Peter Tomlinson, Independent Consultant, Iosis Associates



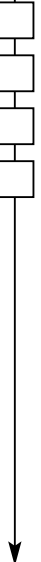
Peter Tomlinson

Very recently the Smart Card and general IT industries suffered a significant loss. Phil Perry, an IT security expert who had been increasingly studying the Smart Card and e-Gov field, picked up first one and then another infection that he could not shake off. In increasingly wintry weather we bade him farewell in early December. Already last autumn we were missing his intellect, quick wit and broad experience - and note that he was at one time a local councillor. I last saw Phil at a meeting of the e-Envoy smart card standards sub-group of the e-GIF standards group. Phil, Steve Beecroft and I were increasingly concerned that good practice in IT security engineering and management was not being followed in a significant amount of public sector e-Gov and Smart Card work, despite the e-Envoy claiming to promulgate government policy on information assurance.

Phil started researching the published e-Envoy material, and the last time that I spoke to him was on this topic - we were considering writing a review paper. Steve and I then tried to complete the research, and wrote it up with the recommendation that the e-Envoy should clarify government policy on the application of the security standard ISO/IEC 17799 (or are they still just thinking of BS7799? - its not clear) to all public sector projects with significant IT content. Attending e-Envoy technical working groups led to thoughts about envoys. What is an envoy and what is an envoy charged with doing? How would we expect an e-Envoy to interpret that duty? In a totally different field, in early December up came the following report on BBC1's Ceefax service: The Commonwealth is to send a special envoy to Zimbabwe before Christmas to explore ways of opening dialogue after the country's decision to pull out. In the dictionary, an envoy is 'messenger, representative', and 'ranking below ambassador' (Concise Oxford). Well, the messenger carries what the boss sends, but the representative is sent to inform, consult and negotiate - and then report back. Either way, the message has to be worth carrying if the recipients are to be co-operative. The message has to be relevant, and the sender has to have something worth taking notice of (I discount the message that is about overwhelming force being used if the 'co-operation' isn't forthcoming). That the envoy method is appropriate in the UK e-Gov context is not in dispute. Both central government and local government consist of a set of semi-autonomous organisations, in which officers have duties, responsibilities and authority as of right. Thus sending an envoy from the centre is indeed valid as a catalyst of change.

The e-Envoy is charged with encouraging provision of better access to the e-world for the public (in business, education, the public arena and the home), and with lubricating the delivery of public services using e-methods. A better citizenry with better services (and with public services being provided at lower cost). The encouragement needs to be on a much higher plane than that of 'motherhood and apple pie' being a good thing. The lubrication needs to be substantive and effective. That all requires expertise on the part of the envoy and his team: technical knowledge and competent delivery. (Charm and negotiating skill has to be taken as read, of course.) Well, in the circles in which I move, the XML work for data exchange has moved forward, but the basic expertise in smart card technology has not been acquired at the centre and the expertise in Smart Card security has not been developed. The paper referred to above reviews delivery expectations as expressed in papers published by government: the picture is confused. It often seems that there is merely a set of inconsistent documents on a difficult to use web site. CESG at Cheltenham are expected to provide the security expertise, but they work like a business these days, and will not invest in up-skilling until they can see the market. Basic smart card expertise is expected to be provided by volunteers from the private sector - we are at the heart of government and they want volunteers! The e-Envoy of course has the new medium to use for communication: he can take advantage of the virtual dimension of the internet and email. And of course he must make the best possible use of that medium. How long has he been in post?

However long it is, we have seen commercial web sites, and those run by volunteers, and even public sector sites, all race past the e-Gov ones in the quality stakes. Is the message good enough? Yes, of course the fun-





damental message is excellent - but the devil is in the detail. Is anything being offered in return? Yes, funding has been released for various projects (the Treasury has to OK that at heart). And also No, because nothing has been offered to ensure that the public sector adequately increases its skill level in both technical and managerial areas. Is it too late for the representative duty of an envoy to be delivered in the e-Gov context? Well, in government and in society it is never too late to do something until it is too late. We may get frustrated, but that is part of the human condition. Let us perhaps understand that movement has been in the right direction, and that we in the industry need to do some more pulling

Identity Theft - Has It Happened To You?

By Elmer Hilgers, Managing Director of IdentAlink Limited.

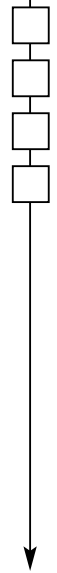


Elmer Hilgers

Imagine the shock of discovering that you've spent £500 in a top restaurant, £600 in a fashion store and £1500 in a jewellers. You may think that this is reasonable - if you actually enjoyed the meal, bought the clothes, and purchased the jewellery. Now imagine that while you were struggling to pay your mortgage, feed the kids and finance your car, that somebody else had stolen your identity and was using your bank details to finance their expensive lifestyle. How would you feel? Depressed? Angry? Ripped off? Unfortunately, the problem of identity theft has reached mammoth proportions, and more citizens are now reporting that their identity has been stolen by an impostor to pay for a luxury lifestyle. The figures speak for themselves; In the UK, industry estimates say that identity theft cost the country £20.6 million in 2002 - up from £14.6 million in 2001. And on the other side of the Atlantic, the picture is just as bleak: A CBS news report in 2001 reported, "every 79 seconds, a thief steals someone's identity, opens accounts in the victim's name and goes on a buying spree." But it's not just inconvenience that occurs if your identity is stolen. The Federal Trade Commission (FTC) estimates that identity theft costs the average victim more than US\$1000 to cope with the damage from identity theft. Such damage may include out-of-pocket financial losses, as well as financial costs associated with trying to restore a reputation and correcting false information for which the criminal is responsible.

What is identity theft? With the subject of identity theft being such hot news throughout the world, many people are now rightly concerned with how they can reduce the risk of being targeted. To understand how we can reduce the risk, we first need to understand what identity theft is, and how it works. There are several ways of committing identity theft, but all revolve around the notion that an impostor wrongfully obtains, and uses, another person's personal data in such a way that fraud or deception occur. At its most basic level, identity theft may involve accessing funds from an individual's bank or financial accounts. This may be easily achieved by obtaining secret passwords that an individual may keep for his or her Internet bank account or for use at the ATM. This method, known as 'shoulder surfing', involves watching the genuine customer punch a PIN number into an ATM, or listen in to a conversation where a credit card number is given over the telephone. It could even involve looking for written evidence of a PIN number or password left close to a computer terminal. Another increasingly popular method is to go through a citizen's rubbish bins to obtain copies of his or her checks, credit card or bank statements, or other records containing information on name, address and telephone number.

In the very worst cases, identity theft may involve taking over an individual's identity altogether. Where an individual's identity is taken over completely, two types of fraud may occur: 'application fraud' or 'account takeover'. Application fraud involves criminals using stolen or false documents to open an account in someone else's name. Criminals may try to steal documents such as utility bills and bank statements, to build up usable information. Alternatively, they may use counterfeited documents for ID purposes. Account takeover involves criminals attempting to gain possession of another person's account. The criminal gathers information about the intended victim and then contacts the card issuer, masquerading as the genuine cardholder, to ask that mail be redirected to a new address. The criminal then reports the card lost, and asks for a replacement to be sent.





Reducing the problem of identity theft. There are many things that we, as consumers, can do to reduce our exposure to potential fraudsters. Firstly, it is strongly recommended that we treat any paperwork such as credit card receipts, bank statements and letters containing our contact details, with extreme care. Wherever possible, unnecessary documentation should be shredded before being put in the bin. Secondly, a number of technologies are now on the market, aimed at promoting privacy and helping consumers and businesses alike to beef up their security. One of the most interesting and innovative technologies currently gaining ground throughout the world is biometrics. Here, the technology provides strong proof that a person is who he or she says he is, and is much harder to steal or forge than traditional methods of authentication.

Why biometrics? Your biometric identity is unique to you, and cannot be given to someone else for his or her use. This compares to other personal data - such as bank account or credit card numbers, passwords, membership cards or tokens, which could be used fraudulently if they fell into the wrong hands. Biometric technology can be used to recognize the identity or verify the claimed identity of an enrolled by measuring a distinct physical (Face, Fingerprint, Iris, Hand geometry, Retinal) or behavioural (Dynamic signature, Gait, Keystroke, Speaker verification) characteristics. Choice of which type of biometric to use for a situation is determined by a number of factors including cost, ease of use and robustness. In the IT security and Internet banking environment, fingerprint and face recognition technologies are making a significant impact, as they address customers' requirements for economical and easy-to-use methods of security.

For example, the BioPassport Enterprise family of security software from IdentAlink has been specifically designed to meet the security requirements of individuals and enterprises. As the problem of identity theft continues to grow, companies such as IdentAlink are developing new solutions that help address consumers' security needs. Make sure that you don't become another fraud statistic: Think carefully about how you securely manage your paperwork and data to ensure that any bills issued in your name have actually been agreed by you!

Don't be another statistic!

New Applications For Contactless Smart Cards

By On Track Innovations

Contactless Smart Card technology has been in widespread commercial use in the United States since the mid 1980's with the advent of long distance contactless technology for toll roads. The technology can be found throughout the United States in areas like New York City (EZPass), Georgia (Cruise Card) and Maryland (M-tag). Each system works on either a prepaid basis or is linked to a credit card or bank account. When funds on the card drop to a certain level, the pass/card is refilled and the credit card or checking account is automatically billed. Mass transit systems have been one of the primary early adopters to contactless Smart Card technology. For more than twenty years, transit systems around the world have used magnetic stripe cards for fare collection.

These systems are fairly limited in the amount of information that can be stored on the magnetic stripe. Hong Kong became the first municipality to widely use contactless Smart Cards when it issued its Octopus card in 1997. The card has become so popular that over 100 retailers in and around the transit system now accept it for payment.

In the United States, perhaps the most widespread retail application for contactless Smart Cards is the Exxon-Mobil SpeedPass. The program began in 1997 and according to ExxonMobil, now boasts over 6 million users and over 7,500 participating Exxon and Mobil stations. Initially, users of the system received a key fob that communicates with a receiver at the gas pump or point of sale terminal. The SpeedPass has expanded in recent years to include retailers like McDonald's in Chicago and Stop-N-Shop in the Boston metro area. The success and growth of the SpeedPass program has led to a number of smart card pilot programs from other retailers including Shell, Taco Bell and Kentucky Fried Chicken.





To date, petroleum payment management has been one of the largest beneficiaries of contactless smart card technology in the United States. With the technology powering Smart Cards increasing substantially coupled with a significant decrease in manufacturing costs, the time is right for a proliferation of Smart Card applications. There is now a cost-effective fuel management system that meets the demanding needs of fleets and private motorists named EasyFuel. The EasyFuel system brings the functionality of contactless Smart Cards to the next level. EasyFuel is a contactless Smart Card based gasoline management system from On Track Innovations Ltd (OTI). OTI has developed a pay-at-the-pump system that requires a substantially less capital investment than existing fuel management systems. Each station needs only one site controller and a nozzle unit on each pump. Communications do not require any station infrastructure and take place between the controller and the vehicle directly through radio frequency antennas. Maintenance is also minimal since no coax cable is inserted inside the fuel nozzle, and does not require replacement like in other systems.

For additional security, EasyFuel offers a driver ID card that can be used to cross-reference drivers and their vehicles. The card can also be used at point-of-sale terminals in the store for purchases as well. The site controller is a radio frequency unit that connects to the station's point of sale terminals through an RS232, USB or PS2 connection, enabling plug-and-play connectivity to the station's existing infrastructure. It reads information from the vehicle tag inside a fleet vehicle and transmits it to the site computer that authorizes the transaction. The controller has an operating range of up to 33 meters. Fuel is dispensed only when communication is established between the nozzle unit and the vehicle tag. The system uses SAM and flash memory making updates and transaction processing easy and cost effective. Most importantly, communications are encrypted using multiple techniques insuring security and data integrity without any corruption. The nozzle unit is attached to any standard fueling pump without the use of cables or swivels. Only when the correct fuel grade is selected and the nozzle is inserted in the tank inlet will the authorization be approved and the fuel dispense. This is especially useful for fleets where fuel management is critical. Refilling will only occur as long as the vehicle tag and nozzle unit are communicating over an operating range of up to 45 centimeters.

Fleet users of EasyFuel receive a dual frequency Smart Card and fuel inlet and long-range antennas. The long-range antenna is attached to the back of the car. Contact is established with vehicles using the EasyFuel system when they are still moving as they enter the station. The vehicle tag can store a variety of data including fuel grade, permissible volume, as well as registration information and method of payment. The Smart Card has full read/write capability allowing for an easy integration of future applications. The tag can be remotely encoded and uses complex security algorithms to eliminate fraud and human error. Another benefit of the EasyFuel system is its ability to manage loyalty programs. As a read/write device, the smart card key fob and/or vehicle tag is programmed with a loyalty reward structure based on purchases and consumption. Users can receive their awards in real-time, as they are reached. When a user gets an award like a cup of coffee or a free car wash or gas, they are prompted to enter the convenience store to retrieve it, promoting additional spending by the consumer. This is also a very effective marketing tool that can be used to build-up existing and new customer resources databases. For the past few years, the system has been operating in South Africa via BP and Exel under the brand name FuelMaster.

There are approximately 500 stations and over 40,000 vehicles currently taking part in the system. In 2002, over 26 million gallons of gas were dispensed through FuelMaster with an expected 45.2 million gallons for 2003. OTI receives a volume-based fee and a monthly management fee for its back-office services. FuelMaster was originally geared to fleet customers as a method to help eliminate fraud, improve billing, information management and processing times. OTI recently announced that ABSA Bank, South Africa's largest commercial lender, has joined its FuelMaster Express program. The program, geared to private motorists, provides access to over 400,000 motorists in ABSA's fuel card programs, allowing for a much greater penetration into the consumer market. BP has endorsed the system and the mayor of Capetown gave a special recognition to OTI. The trial has been so successful that BP Africa is expanding the system to ten additional countries. There are many factors including cost, portability and infrastructure investment, to consider when deciding on a pay-at-the-pump petroleum distribution system. EasyFuel has proven itself as a low-cost and effective tool in creasing sales and customer loyalty. The time is now to consider moving forward to a contactless payment solution. The US-VISIT programme is part of a worldwide trend towards tightened securi





The Smart Secure Path Ahead

by Jason Smith, Production Editor, Smart Card News



As we enter a new year, concerns over security seem to rise along with the date. Companies are now becoming more aware of the growing threats to their business's livelihood both externally and internally. Companies are sitting up and taking more interest in their enterprise security committing themselves to Smart Card-based technology as a means of protection. A new survey aimed at providing a market insight into the present security systems, needs, and prospective future trends of American Fortune 500 companies has concluded that one third of fortune 500 companies plan to use Smart Cards for corporate security by 2006. The U.S. Corporate Security Systems Study 2003 commissioned by Gemplus International S.A., a provider of Smart Card solutions and carried out by Frost & Sullivan, a growth consulting company interviewed 69 Fortune 500 senior executives, and found there was a profound interest in using Smart Cards as part of their physical and/or logical security systems. "More than 63% of the Fortune 500 executives interviewed either have investigated or are investigating Smart Cards for network security," says Deepak Shetty, Senior Industry Analyst at Frost & Sullivan. "Furthermore there was a 100% awareness of Smart Card technology among those interviewed. These are extraordinary figures considering the fact that most companies hadn't even heard of Smart Cards three years ago."

In 2002 it was reported by the Federal Bureau of Investigation (FBI) and the Computer Security Institute (CSI) that 90% of large corporations and government agencies had detected computer security breaches within the last year. The traditional employee badges used within most corporations today are unable to address all these electronic security issues. Results from the U.S. Corporate Security Systems Study indicate an increased interest in Fortune 500 companies to deploy a single token for both physical and logical security. Smart Cards respond to this challenge by offering a versatile platform to combine building access and network security on one card, and as a result, have experienced an increased uptake by large corporations in the last few years."More than one-third of Fortune 500 companies surveyed, 39% to be precise, plan to use Smart Cards to enhance and strengthen their corporate security systems within the next three years," says Dave Ludin, Gemplus's Vice President of Financial and Security Solutions in North America. " This research shows that already 30% of Fortune 500 companies are currently using or testing Smart Cards within their security systems."

Gemplus, who commissioned this report, are a prime example of this new security drive by companies. They have leveraged their own internal experience and deployment into helping companies like Boeing Corporation and Denver Health to offer more secure and convenient identification systems to their employees. Through its recently launched SafesITe, Gemplus has been able to provide it's customers and system integrators with all the products (cards, readers & software) and services necessary for deploying multi-purpose employee cards. With Smart Card based security solutions like this now available, managers should be able to confidentially enter this forthcoming year knowing their enterprises can potentially be safe and ready to achieve a prosperous new year without any fear of violation.

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