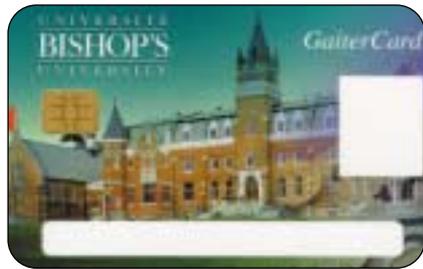


SMART CARD NEWS

December 2001
Volume Number 10 12



Subscribers will receive ITC System's *Ottawa University Campus Card* free with this issue of Smart Card News.



European Banks Setting Pace in Chip Migration

Visa EU has predicted that, by 2005, nearly 90 per cent of European Visa cards will carry a chip. To maintain the same level of acceptance enjoyed by today's cardholders, Visa has worked with other industry leaders to establish the EMV (Europay, MasterCard, Visa) specifications for global interoperability. The Common Electronic Purse Specification (CEPS) fulfills the same role for electronic purses.

By the mid-point in Visa's seven-year programme, in October 2001, the majority of European acquirers - processing over 90 per cent of European Visa sales volume - were capable of processing chip data.

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Main Photograph

Marc Temmerman, Executive Vice President, Marketing & Relationship, Visa International, (EU) region demonstrates Visa's EPOS integrated chip&pin

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Migration to Chip

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Visa EU is actively encouraging the migration to chip cards with a timetable for the introduction of the necessary infrastructure, practical support, such as project co-ordination and business and technical consultancy; and backing this with a Euro 168 million chip migration fund providing European banks with financial incentives. It has negotiated preferential rates from a range of leading chip card manufacturers, terminal manufacturers and related technology vendors and encouraged the production of a range of low-cost EMV cards.

In a further, and less popular incentive, Visa has decreed that any bank that has not invested in chip technology by 2005 should be responsible for any fraud losses that chip would have prevented.

The initial business rationale for the introduction of chip cards is the level of security they offer to banks, cardholders and merchants. This is especially important given the recent increases in payment card fraud and, in particular, the rapid growth of counterfeit fraud. Current estimates are that total fraud reduction as a direct result of accelerating the move to chip will be worth over Euros 700 million.

However, as they can be tailored to individual customers, and can incorporate multiple applications, chip cards also provide banks with new business opportunities. They also have the potential to increase the security of on-line or e-commerce transactions.

Momentum is building behind the European migration process. As of October 2001, the UK market was well into the implementation phase with one-in-four Visa cards carrying a chip, quarter-of-a-million terminals in place, and Visa processing more than two million chip transactions a month.

By October 2002, Visa EU estimates that a further 11 markets will have joined the implementation phase, including France, Italy, Spain and Sweden. By January 2005, it is estimated that all but one-or-two of the smaller European markets will have achieved critical mass.

Twenty million Visa branded EMV cards have been issued to date and there was estimated to be 3 million EMV transactions processed in the last quarter. Of Visa's 700,000 targeted EPOS systems; 50,000 will be EMV & PIN capable by the end of 2002. Half a million POS systems will also be

ready by the end of the year.

Countries which have already joined the implementation phase such as France, Italy, Spain and Sweden are scheduled to be issuing EMV cards in the first quarter of 2002.

Europe is clearly setting the pace in the global migration to chip cards.

Visa EMV Card for \$1.99

Visa EU, which recently announced a Smart Card costing less than one US dollar (SCN August 2001), is introducing a new low cost EMV card with enhanced functionality and fraud protection which will be available next year at a cost of \$1.99.

The new card is being developed by ST Microelectronics in partnership with IBM. It will contain a crypto-coprocessor and is aimed at markets that require an enhanced level of authentication when transactions are conducted offline. One of the first Smart Card manufacturers to offer the new card will be ORGA.

The card also offers Dynamic Data Authentication (DAA), a protection against "skimming," the illegal copying of data on one card to create a duplicate, fraudulent card - a practice rife in mainland Europe.

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Sell off of STM Stock

France Telecom and Finmeccanica this month announced that they were reducing their stake in ST Microelectronics through the sale of 60 million common shares and exchangeable bonds. The move will cut their stake in the semiconductor company by 7%. France Telecom is striving to cut its debt mountain after heavy acquisitions and investments in mobile phone technology while Finmeccanica, the Italian defence and engineering group, plans to focus on and fund growth in its core aerospace and defense business. STMicroelectronics' principal shareholder is the wholly owned subsidiary ST Holding, which is indirectly owned 50% by FT1CI (consisting of French company Areva and France Telecom), and 50% by Finmeccanica.

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ERG Acquires Venus Platform

ERG Group has acquired a licence for Motorola's Venus Platform Smart Card technology and the purchase of certain machinery and equipment needed for the manufacture of Venus Smart Cards.

ERG, which acquired Proton World on 31 October 2001, says that the Venus technology is the only Smart Card technology in the world today capable of supporting high-speed contactless Smart Card transactions which also has Proton World certification.

As part of the transaction, ERG has on-sold the manufacturing equipment to the French Smart Card manufacturing company ASK and appointed ASK as its preferred supplier for Smart Cards to ERG for its transit projects. To enable ASK to supply ERG Smart Cards, ERG has granted ASK a non-exclusive sublicense to the Venus technology. ERG will also sub-license the Venus Platform to other Smart Card manufacturers so that its customers have dual source supply and competitive pricing.

Viv Miners, ERG's Chief Technology Officer, said the Venus technology was important to ERG's expansion beyond transit applications of Smart Cards.

The Venus platform is the first to combine a high performance transit application and a Proton open electronic purse on a dual interface Smart Card and the technology is currently used by ERG in transit projects in San Francisco, Rome and Manchester.

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Datakey Smart Card Order

Datakey has announced a \$400,000 initial order from a multi-national chemical company for Smart Cards, readers and CIP client software to enable strong user authentication for the corporation's virtual private network (VPN). This order is about 25% of the total planned order roll-out to be completed over the next 12 months.

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Infineon and Sony Co-operation

Infineon and Sony are to jointly develop secure ICs for contactless chip card systems. The new chips will be based on Sony's FeliCa contactless chip card technology and will be integrated as dual interface chips with both contact and contactless interfaces. The chips are scheduled to be available by the end of 2002.

Dr Hermann Eul, General Manager of Infineon's Security & Chip Card ICs Business Group, explained: "This agreement enables complete system solutions paving the way for powerful chip cards that combine multiple applications such as public transportation services, electronic purse systems and identification, as well as best-price loyalty programs."

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Social Insurance Card in Austria

ORGA Kartensysteme with its co-operation partner, IT service provider EDS, has been awarded the contract to introduce a social insurance Smart Card in Austria.

By mid-2003, an end-to-end network solution will replace the 40 million health insurance slips now issued each year.

That means that around eight million insured persons and their dependants will be provided with Smart Cards and approximately 18,000 contract partners equipped with terminals within two years.

No healthcare data will be stored on the card which will be used to replace health insurance slips and contain the information on cardholders, including their insurance number.

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Dione Buys Systek

UK-based Dione has bought Systek, the terminal division of Sonera Solutions Oy of Finland which has a 40 per cent share of Finland's terminal market. The new company will be known as Dione Systek and will continue to service its 10,000 customers from offices in Helsinki. Enrique Garrido, Dione's CEO, said: "This was a good opportunity for Dione to move into a market in which our products are already well-known and respected under the Systek brand."

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Drug Stores to Sell Monitor

Lifestream Technologies has announced that CVS Corporation, the US drug store chain, has agreed to distribute the Smart Card-based Lifestream Personal Cholesterol Monitor at its 4,100 retail locations nationwide and on its Web site, CVS.com. The device offers consumers a fast, easy and accurate way to monitor their cholesterol levels in the convenience of their home between doctor's visits. Equipped with an embedded Smart Card reader, the device allows users to save past results and share them with doctors and pharmacists to partner in their own preventive healthcare.

The monitor has a suggested retail price of \$129.95.

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Chip Equipment Sales Slump

Worldwide sales of chip production equipment for 2001 will fall by 38% to \$29.6 billion - the biggest annual decline in the sector's history, according to a new report from Semiconductor Equipment and Materials International (SEMI). Reasons for the decline were given as spending cuts on plant and machinery and a general slowdown in the global economy.

New RFID Products from Infineon

Infineon has announced a new range of Radio Frequency Identification (RFID) products with height-

ened security features to enable the production of identification systems that are resistant to counterfeiting or unauthorised tampering. The new crypto version of Infineon's my-d chips can be used to store and protect confidential data on a Smart label, or to securely embed information into manufactured goods during production. In personal identification applications, the security features can be used to authenticate the access status of a cardholder. The features also support secure storage of cash value amounts, allowing use of the chips in cards for pre-paid payment applications.

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Gemplus Contract in Tunisia

Gemplus has secured an exclusive contract with Tunisia's SMT (Societe Monetique Tunisie) to provide the technology for the country's migration to a Smart Card-based EMV solution in a deal valued at "several million Euros." Gemplus will be the sole supplier for the first three years of the migration which begins in January 2002 and will provide cards, training and a personalisation centre. The cards will be distributed countrywide in all the bank's 13 outlets.

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Contactless Kit From AmaTech

AmaTech USA is to launch a serial software development kit aimed at developing contactless Smart Card applications based on MIFARE systems. The Contactless Smart Card Serial Software Developers Kit comes in three versions:

- the WavePort SDK for applications that integrate AmaTech's WavePort serial contactless Smart Card reader
- the OEM SDK, which includes an OEM reader for integration with other products, or
- a combination of both

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US \$25 Million for Move to Chip

Visa International Asia Pacific has announced a US \$25 million regional investment to speed the migration from magnetic stripe payment cards to EMV-standard Smart Cards.

Regionally, Visa and its Members will concentrate their initial investment and efforts in countries that have already started work on Smart Cards or expressed concerns about escalating fraud levels.

Under the scheme approved by the Visa International Asia Pacific Board of Directors in October 2001, the investment has been allocated to support a range of regional initiatives that will benefit Visa card-issuing banks, acquiring banks, retailers, technology providers and consumers.

The funds will be available over a seven-year period, starting in 2002. The initiatives include:

- Training programs for banks, vendors and industry partners
- Enhancement of EMV testing facilities and services
- Support to vendors to increase their range of EMV products and services

According to Rajiv Kapoor, General Manager, Marketing and Product Sales, Visa International Asia Pacific: "The move to chip will have considerable savings in fraud related losses. A number of our major countries, such as Japan, Taiwan and Korea, have already embarked on this accelerated migration, and we expect other countries to follow suit rapidly as the benefits are magnified."

Website

www.visa-asia.com

Amex Blue Promotion with Virgin

American Express, through its flagship Smart credit card Blue is offering cardholders a 30% discount at Virgin Megastores in the US throughout the holiday season as part of its Blue for Music promotion. The promotion will last until Boxing Day this year.

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Louisville University Student Card

The University of Louisville in the US is the first customer to secure the services of the recent CyberMark/SchlumbergerSema partnership, with the announcement that it is to implement a CyberMark Smart Card program on its campus.

The card will be able to store electronic currency, verify student digital identities and function as an ATM/debit card in conjunction with the University's banking partner, Firststar.

Website

www.cybermark.com

Loyalty Partnership

Giesecke & Devrient and Smart Chip Technologies are partnering to jointly market a series of Smart Card solutions. The first phase will see the integration of G&D's Java chip cards Sm@rtCafé Lite and Sm@rtCafé 16 with Smart Chip Technologies' e-Illiance and LoyaltyCentral loyalty systems.

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Smart Money Support

SmartTrust and Philippines mobile operator Smart Communications have agreed to jointly market a new payment concept in the country based on SmartTrust's Smart Money MasterCard payment system.

Smart Money is claimed to be the first wallet card linked to a mobile phone and aims to serve establishments that do not usually accept credit cards. SmartTrust estimates that over 15,000 establishments in the Philippines currently accept Smart Money as payment.

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Digital Signature "Reality Check"

Only a few trusted third-party providers will overcome the legal and technological issues needed to bring digital signatures to the B2B market, according to a report by Celent Communications.

The report, "Identrus: No PAIN, No Gain for Banks in the Business Value Chain," claims that banks must move beyond secure messaging and offer other value-added applications enabled by their trust infrastructure in order to build closer ties with corporations.

The impact of digital signatures will be greatest in segments with special security or trust requirements, says the report. "Digital signatures will affect markets in Europe more than in the US, because Smart Cards are widespread, as are e-signature laws that either explicitly or implicitly endorse a third-party trust infrastructure," said report author Alenka Grealish.

The report spotlights Identrus, a global bank consortium which has succeeded in making digital signatures a reality for banks and their corporate customers. Grealish added: "Identrus stands out as the only contender that has established globally binding policies and rules."

The report is available from:

■ **Celent Communications**

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ORGA QA Alliance with SQS

ORGA Kartensysteme has formed an alliance with Cologne-based consulting firm SQS software to expand its quality assurance (QA) activities to secure the services of SQS' consultancy division.

The first joint project is the development and introduction of a UMTS-ready Java card, USIMtelligence, which is scheduled for launch at the start of 2002.

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STM / Hyundai Launch EMV Card

STMicroelectronics and Hyundai Smart Technologies have announced the first VSDC (Visa Smart Debit/Credit) Technology Level 3 Approved dual-interface multi-application EMV Smart Card. The card is aimed at accelerating the migration to chip-based EMV compliance with the addition of a contactless interface for new applications.

The card is based on STM's ST19RF08 Smart Card controller IC and has already been certified by the Korea Electric Testing Institute as being compliant with the Korean national e-Purse scheme, K-cash.

Chun Kyung Kim, General Manager at HST, said: "This card represents a major breakthrough for the Korean banking community as it will significantly increase the opportunities to deploy the secure Visa VSDC cards with the K-cash purse, with the unrivalled advantage of the contactless capability."

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ICMA Elan Award Winners

The International Card Manufacturers Association (ICMA) has announced the winners of its 5th annual Elan Awards for Card Manufacturing Excellence.

Best Non-Secure Card Design:

Nordstrom Coffee Bean Card

Client: Nordstrom

Manufacturer: QualTeq

Best Secure Card Design:

President's Choice MasterCard

Client: Credit Union

Manufacturer: Giesecke & Devrient

Best Phone Card Design:

Hacelia Attenuata

Client: Croatian Telecom

Manufacturer: Marimpex

Technical Achievement:

CD SIM Promotional Card

Client: ORGA Kartensysteme

Manufacturer: ORGA Kartensysteme

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SSP and Atmel Deliver USA-Forte

SSP Solutions and Atmel Corp have announced USA (Universal Secure Access)-Forte, a 32-bit cryptographically enabled Smart Card. The two firms, along with the SSP-Litronic division, have developed USA-Forte with guidance from the National Security Agency (NSA), and it is the only Smart Card designed and manufactured in the US.

USA-Forte is powered by the Atmel AT91SC-321RC chip and uses an on-chip DES (data encryption standard) accelerator and a high-speed USB I/O port to support increased storage and fast on-card cryptographic processing. The card has 96K bytes of ROM and 64K bytes EEPROM and will begin shipping in first quarter 2002.

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Catuity and Cards etc in US Deal

Catuity and Australian Smart Card software developer Cards etc have formed a marketing agreement targeted at the US and world markets. The alliance will build upon the integration of the Catuity personalisation process with Cards etc's Arterium Smart Card management software system that was announced earlier this year.

The announcement follows recent developments which saw both companies announce deals with Visa USA. The deals saw Catuity's suite of loyalty software and technology being applied to the Visa Smart Card platform and Cards etc become a member of the Visa Smart Partner Program.

Cards etc's Michael Walters said: "Acceptance of Smart Cards in the US market will likely succeed based on the utility the card provides to the card holder and merchant acquirers. New transaction schemes and fraud reduction, which drove Smart Card acceptance in Europe, will not likely move this technology forward in the US."

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Siemens End Control of Infineon

Siemens has relinquished its controlling share in Infineon with the transfer of its majority shares to an open market transaction. Siemens previously held a 50.4% share in the company and this has now been cut to under 50% with Siemens effectively giving up its voting right majority.

Siemens said the move is a natural consequence of the launch of Siemens semiconductor division and the subsequent initial public offering of Infineon. The company also claimed that the deconsolidation is an interim step and that Siemens' overall goal is to withdraw from Infineon completely.

Injunction protects Infineon

Infineon this month announced that the Federal District Court for the Eastern District of Virginia said it will issue an injunction barring Rambus from asserting its fraud-tainted US patents against any of Infineon's SDRAM and DDR SDRAM products manufactured according to open industry standards.

The Court's entry of a permanent injunction affirms the August 2001 decision of Federal District Judge Robert E Payne to uphold a Virginia jury verdict that Rambus committed fraud in connection with the SDRAM standardisation process of the Joint Electronic Device Engineering Council (JEDEC).

Dr Ulrich Schumacher, President and CEO of Infineon, said: "As the Court noted in August, the fraud committed by Rambus affected an entire segment of the semiconductor industry. This is a very important decision both for Infineon and for the entire DRAM industry."

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Thames Card Wins BP Contract

Thames Card Technology has been awarded a four year contract to manufacture all BP loyalty and fuel cards on a pan-European basis, involving the supply of some eight to nine million cards per year.

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Contact Card Ticketing in Canada

A contact Smart Card electronic fare collection system is being introduced in parts of the city of Montreal in Canada. Called Scotia TranSmart, the system has been developed by Edgware Technologies and it is being implemented by e-Scotia, the e-commerce subsidiary of Scotiabank.

The system is being installed for the CIT Roussillon and Le Reichelain area transport boards in the Montreal area to enable travellers to purchase electronic tickets and passes.

Claude Beaudoin, EdgeWare's Vice President Engineering, said: "Our goal was to have transit operators take a serious look at cost efficient contact card systems which could be expanded into a community card while maintaining high transaction speeds for passenger boarding."

Smart Chip Selects Silverline

Smart Chip Technologies has selected Silverline to handle ongoing development, maintenance and support for its e-lligance multi-platform Smart chip loyalty application and LoyaltyCentral back office operations software.

Silverline's e-payment division will set up an offshore development centre which will be responsible for the technical integration of the loyalty software with Smart Chip Technologies' partners.

Intellect Wins \$2.5 Million Contract

Australian company Intellect has announced a \$2.5 million contract for electronic payment systems in Germany.

The German authorities have approved the new generation of Intellect Sapphire wireless terminals, giving Intellect an opportunity to get into the expected huge market of 400,000 terminals which have to be replaced due to the introduction of the Euro and the new EMV payment standards.

Gemplus and TDC Team

Gemplus has signed a Memorandum of Understanding with Danish wireless operator TDC Mobile to jointly develop pilot projects for mobile network related services and solutions in Europe.

The two companies have revealed that they are to share market and product information and work toward developing solutions for the ARPU Factory - Gemplus' mobile solutions suite of products. Gemplus' Paul Naldrett said: "With the Wireless world becoming increasingly competitive, now is the time to think in different ways regarding traditional supplier - customer relationships."

Smart Card Ticketing Pilot



An electronic fare collection system is being piloted in the San Francisco bay area in the US of the TransLink Universal Transit-fare Card.

The TransLink card will be tested on selected routes and at certain stations of six of the regions largest transit agencies: AC Transit, BART, Caltrain, Golden Gate Transit, San Francisco Muni and Valley Transportation Authority. These agencies will integrate ferries, streetcars, buses and commuter rail involving 18 rail stations, 31 bus lines, three ferry terminals, two light rail lines and 50 transfer points being equipped with TransLink card readers.

G P Specification Name Changes

Global Platform has announced it is to change the name of its Open Platform Specifications to GlobalPlatform Specifications. The organisation stated that the change was necessary to avoid confusion with the growing generic nature of the term Open Platform within the industry.

The current technical specifications developed by the organisation which define the architecture of multiple application Smart Cards and terminals will be renamed, respectively, as GlobalPlatform Card Specification version 2.1 and GlobalPlatform Terminal Framework Specification version 2.0. All current systems specifications will also be renamed accordingly.

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Intercede OEM Contract

Intercede has signed an OEM agreement with an undisclosed partner to license Intercede's Edefice distributed software to Web-enable its new range of Smart Card and digital identity software products. Under the agreement, the partner will license Edefice on a per user basis for each digital ID device (Smart Card, USB key or token) that is managed by the partner's products in a Microsoft environment.

The agreement includes a commitment by the partner to buy an initial number of licences to the value of US \$800,000 against a series of development milestones which are scheduled for completion by March 2002.

This new contract is in addition to Intercede's existing OEM contract with Oberthur Card Systems and consolidates its position as an international supplier of security management software for Smart Cards.

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Gemplus Win eConnect Contract

Gemplus is to supply loyalty-based Smart Cards and consulting services to eConnect to develop Smart Card loyalty and micro-payment Internet applications that will be compatible with its eCashPad USB hybrid magnetic stripe reader, PINPad and Smart Card connector.

eConnect aim to provide Internet merchants who offer the eConnect Bank Eyes Only service with the ability to enable customers to use the eCashPad USB when purchasing online.

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Welcome and Cards etc Alliance

Welcome Real-time and Cards etc are co-operating to simplify the implementation and management of the companies' Smart Card programs. The agreement will build upon the integration of Welcome Real-time's XLS and Cards etc's Arterium solution and claims to offer a significant reduction in Smart

Card implementation cost and time.

"Issuers face important new support issues as they upgrade to Smart Cards," said Aneace Haddad, President and CEO of Welcome Real-time. "Integrating XLS and Arterium from Cards etc provides issuers the tools they need for everything from fast and accurate answers on programs or card replacement, to managing application programs and security across multiple card technologies and loyalty systems."

Enhanced Shell Secure Software

SSH Communications Security has announced the latest version of its encryption software, SSH Secure Shell 3.1, designed to protect end users, businesses and developers from having their passwords stolen over the Internet. The new version of Secure Shell integrates extended PKI (public key infrastructure) features and interoperability for more secure digital certificates and Smart Card-based authentication, plus increased support for Windows servers.

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Enhanced Affina System

Datacard has released a new multi-issuer version of its Affina Smart Card Management software which will allow logical data separation of both configuration and cardholder data allowing multiple users to access a single Affina system and share information.

"With the multi-issuer management capabilities of the Affina system, card issuers will be able to offer a wealth of new services to their customers," said Datacard's Marketing Director, Chris Lomax. "Card issuers will be able to instantly download any new applications offered by their strategic partners, opening new revenue streams, reducing time to market and strengthening customer loyalty."

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SCI and Sagem Launch W-OS

Smart Card Integrators (SCI) and Sagem have announced the launch of the W-OS open-source Smart Card operating system which offers worldwide interoperability and third party licensing opportunities.

The new W-OS is derived from Microsoft Windows for Smart Cards (WfSC) v2.0 operating system and combines Sagem's GSM and security expertise and SCI's ePurse development.

SCI and Sagem are currently working on agreements to license the new operating system with Smart Card companies Datacard and Incard. The new W-OS is already available on all Atmel secure micro controller chips.

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Smart Label Inlays from Texas

Texas Instruments Radio Frequency Identification Systems (RFID) has launched its new Tag-it line of ISO-compatible RFID inlays. The new Smart label inlays comply with the latest ISO/IEC 15693 global standards for 13.56MHz RFID vicinity cards and Smart labels.

The new inlays are to be supported by TI's recently introduced ISO compliant readers which include the Tag-it S6500 and S6550 long-range readers and the S6350 mid-range reader.

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New Chairman at Dione

Patrick Jones has joined UK terminal supplier Dione as non-executive Chairman. Previously he was Senior Vice President and Chief Financial Officer with Gemplus International and earlier was Corporate Controller of Intel Corporation.

New SIM Converter from ORGA

ORGA has announced a new SIM card converter that allows full sized Smart Card readers to be used for SIM testing. The device converts plug-in form SIM cards to the ISO 7816 full size specification.

The new SIM converter is aimed at protecting the SIM from potential damage caused by insertion misalignment and preventing plug-in size SIMs from falling into card readers.

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ICMA Welcomes New Members

The International Card Manufacturers Association (ICMA) has welcomed the following new members: Associate members: Ilapak, Newtown, PA, USA and Ontario Die Company, Waterloo, Ontario, Canada. Principal member: Jing King Technology Holdings, Kwun Tong, Hong Kong. Branch principal member: DZ Card (Malaysia), Kabala Lumpur. Manufacturers representative member: Kilopass Data Canada, Vancouver BC.

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Three Format Smart Card Reader

UK company Flint, distributor of electronic components, has announced availability of a new Smart Card reader which will support standard Smart Card, contactless and magstripe technologies from a single RS-232 port.

Based on the Gemplus Gemcore chipset, the new Panasonic units are said to intelligently detect what type of card is being used. It offers support for ISO-14443 and ISO-15993 standards ensuring compatibility with popular RF-ID platforms including MIFARE, I-Code and Tag-iT.

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Al Irato Honoured

Al Irato, Vice Chairman of Hypercom Corporation, who helped to build the company into a leading global provider of electronic payment solutions, has been awarded the 2001 Robert A. Mooney Achievement Award which recognises contributions to the electronic payments industry. Prior to joining Hypercom, he was a Senior Vice President with American Express.

Announcing the award, Electronic Funds Transfer Association (EFTA) Chairman Walter C Patterson said: "Al Irato's contributions to our industry are many and legendary. From his pioneer work with Express Cash to Hypercom's new generation of secure terminals and value-added information services platforms, he has been a force for change and evolution."

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Face Recognition Pilot

Level 3 Communications is pilot testing a face recognition system at one of its data centres. AcSys Biometrics Corp and Graphco Technologies have begun testing AcSys' Face Recognition System and G-TEC's FaceTrac products to demonstrate the added security delivered by facial biometrics in facility access control and surveillance.

"Level 3's acquisition of the pilot facial biometrics system underscores our commitment to deliver the most technologically up-to-date, secure co-location facilities for our global communications customers, and to continually upgrade our security systems," said Marshall Sanders, Level 3's Vice President for Global Security.

Website

🌐 www.graphcotech.com

Wireless Alliance

SchlumbergerSema has teamed with Televigation to provide location-based services to mobile communications operators in North America. The alliance will allow users to access information via voice, WAP or SIM card applets on a mobile handset.

First Data Win Kuwait Contract

First Data Europe has won a contract to provide the cardholder and merchant transaction processing for National Bank of Kuwait, the largest financial institution in Kuwait. Financial terms of the agreement were not disclosed.

The transfer from the bank's in-house processing to the First Data Europe system will take place over the coming months. According to First Data, the system will enable the bank to benefit from enhanced Smart Card functionality.

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Protecting the FAA's Mobile PCS

The Federal Aviation Agency (FAA) has ordered a secure remote access system from SSP Solutions to protect data on field computers used by its Aviation Security Research and Development Division.

The deal worth \$799,000 involves an undisclosed software encryption solution and more than 6,000 Smart Card readers and Smart Cards for two-factor authentication. The system is aimed at protecting data and secure access from field laptops and notebook computers and is claimed to be specifically designed to support mobile computers.

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Smart Biometric Reader

SCM Microsystems and AuthenTec are partnering to develop a Smart Card reader incorporating biometrics for launch in the first quarter of 2002. The PCMCIA reader will use AuthenTec's EntrePad fingerprint sensors, based on the company's TruePrint technology.

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GSM Users Reach 600 Million

The number of people using GSM phones globally has reached the 600 million mark according to the GSM Association and is expected to exceed 630 million by year end.

Currently GSM is the system of choice in more than 171 countries of the world. Today, with more than 55 GPRS networks commercially deployed around the world, the promise of wireless access to data / Internet services is also becoming a reality.

Rob Conway, CEO of the GSM Association, said: "The GSM global wireless family continues to be the world's fastest growing and most widely deployed wireless technology. With the total digital wireless market expected to reach one billion customers by year end, GSM is best placed with over 70 per cent market share to fully maximise the opportunities of verbal and visual wireless communications ahead.

"Today we are pushing forward our vision of the GSM family platform into the future, including General Packet Radio Services (GPRS), Enhanced Data rates for GSM Evolution (EDGE) and 3GSM."

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ORGA SIMtelligence Technology

Orange, the UK mobile phone operator, is to use ORGA's new technology to build a SIMtelligence Centre for its customers.

According to Graham Carson, ORGA UK's Managing Director, the technology will make the mobile telephone "a personal assistant in everyday life."

SIMtelligence is based on the GSM specifications SIM Application Toolkit and Over-the Air-Provisioning and will enable users to register and select a whole range of services from traffic reports, restaurant guides or the latest stock market information.

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Turkcell and Aria in Roaming Row

Turkish telecom company Turkcell is to take legal action against the country's new 1800 GSM operator Aria, following claims that Aria did not honour a national roaming agreement between the two companies.

Turkcell has obtained an injunction from the Ankara Fourth Court of First Instance regarding the conflict after the national Telecom Board failed in its bid to broker an agreement. Following the court's decision, the agreement has been scrapped, leaving Turkcell 30 days to launch its legal case against Aria.

First Wireless PKI Portal

eSignX has announced that it is to launch the first ever WPKI (Wireless Public Key Infrastructure) Portal that will enable digital signing and management of user certificates from handsets that conform to the current WAP 1.2.1 standards.

The new service was developed in partnership with SchlumbergerSema, KG Telecom and TaiCA.

Website

✉ www.esignx.com

Japanese Wireless Partnership

Gemplus has joined forces with Japanese Java specialists K-Laboratory Co., headquartered in Tokyo, to develop applications for Java enabled handsets that will aim to exploit the arrival of 2.5 and 3G wireless services in Japan. The alliance plans to develop an architecture for distributing Java applications between Java enabled handsets, Smart Card and servers.

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Nokia Expands Omnitel Network

Nokia has signed an agreement with Lithuania's biggest GSM operator Omnitel to supply and install additional switching capacity to expand the company's GSM 900/1800 network capacity.

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ActivCard Acquires Ankari

ActivCard has purchased Canadian biometrics firm Ankari in a \$18 million cash deal and plans to integrate Ankari's authentication, policy management, biometrics and single-sign-on technology with its own Smart Card and digital identity solutions.

CEO Steven Humphreys said: "Large-scale digital ID projects around the world are demanding tight integration of Smart Cards and biometric technology. Our acquisition of Ankari expands the breadth of our digital identity products."

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ID Cards for Sri Lanka Airport

Sri Lanka's Airport Aviation Services is to implement a digitised photo ID system for employees, temporary staff and visitors using Datastrip's ID card technology. Epic Lanka, Datastrip's systems integrator, will implement the project which will initially see cards issued to 6,000 employees, temporary workers and pass holders. It is planned that the scheme will eventually include all visitors to the airport.

The ID cards with encoded photographs will be decoded and displayed using Datastrip's DSVerify2D terminals which can also provide fingerprint verification.

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Shell Oil Contract for Keyware

Shell Oil is to use Keyware's Smart Shopper Smart Card software for its customer loyalty program in Greece and will take an initial delivery of 126,000 magnetic stripe cards, with software integration and user terminals.

Keyware's partner, systems integrator Inform Lykos, will be responsible for the implementation. Keyware recently licensed its loyalty software, Smart-Shopper, to Lykos for 625,000 Euros, for a maximum production of 500,000 cards. The contract with Shell Oil is the first result of this deal.

Current EuroShell Cards, which use a magnetic stripe and PIN code, are accepted at an estimated 20,000 service stations in 35 countries. The cards can provide optional account features including tracking local currency exchange data, capturing mileage at refuelling, VAT recovery information, and payment of tolls and road taxes.

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DoS Contract for Visionics

Visionics Corporation has received an order from the US Department of State (DoS) and from two 'Category X' airports for 10 FingerPrinter CMS live scan systems and one card scan system in a deal valued at \$400,000.

The DoS will add the system to its existing Visionics' set-up, enabling it to electronically capture and transmit fingerprint records to the FBI for criminal background checks on job applicants, contractors etc. The company anticipates completion of the order by the first half of fiscal year 2002.

Dr Joseph J Atick, Chairman and CEO of Visionics said: "In the aftermath of September 11th we are seeing significant interest in our live scan fingerprinting systems for criminal history checks for government and airport employees.

"This is now becoming a requirement for a wide range of jobs. For example, the FAA is mandating background checks for all airline and airport employees, not just newly hired ones, with access to secure facilities at US airports. The FAA estimates that 700,000 aviation employees will have to be fingerprinted in less than one year, which fuels further demand for our live scan products."

The new order from the DoS follows a recent million-dollar order from the INS and the Federal Protective Services for similar equipment.

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Cost Barrier to Biometrics

Despite the benefits biometrics could bring to financial institutions and consumers alike, the high cost of implementing these technologies combined with a lack of industry consensus could delay its widespread use for at least a decade, according to new research from TowerGroup's Retail Brokerage and Investing service.

The report, *Biometrics: Security for the New Millennium?*, finds that contrary to popular wisdom, concerns over privacy will not keep consumers from adapting to biometric screening. Instead, convenience will be the key to the acceptance of biometric technology use in retail financial services.

Biometric authentication has clear potential benefits for the financial services industry. By accurately validating clients' identities, financial institutions will be able to drastically reduce costs related to identity theft, while simultaneously assuring consumers that their financial assets are well-protected.

However, the report adds, the high cost of implementing these technologies is currently the single greatest barrier to their roll-out across retail financial services. Ultimately, an institution would have to retool every customer touch-point with new biometric hardware, in addition to costs for training personnel, educating consumers through marketing materials and integrating biometric technologies with existing IT systems.

Either private sector consensus or government mandate will be essential to developing interoperable biometric authentication systems that offer real value to consumers, and reap the technology's full benefits.

Following the events of September 11th, it is more likely that the government will play a key role - either directly through a state or national biometric identification scheme, or indirectly by setting mandates and/or offering fiscal incentives to encourage private sector adoption.

Jean-Paul Carbonnier, an analyst in TowerGroup's Retail Brokerage and Investing practice, said: "Biometrics has always been a highly-charged subject. But there is no doubt that recent world events have increased both interest in, and debates over, its appropriate application.

"Concerns over national security now stand side-by-side with more business-driven authentication issues-such as fraud prevention-as well as with questions about the protection of individuals' privacy and civil liberties.

"Ultimately, TowerGroup believes that the government will need to play a key role in any broad roll-out of biometrics technology. If implementation is left to the private sector alone, the national security and business benefits of ubiquitous biometric identification may take at least 10 years to reach," he said.

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Biometrics for Airport Security

International Automated Systems is developing an airport security system using its biometric identification technology to enable airlines to match passengers to their tickets and their luggage.

Recently passed government legislation for air safety has a provision that provides \$70 million a year for development of new security technologies and requires the FAA to begin testing, in at least 20 airports, emerging technologies such as biometric identification.

IAS has already created a working demo of its biometric system for airport security and to integrate with the existing check-in and security infrastructure.

A passenger checking in for a flight keys in an airline confirmation number for the flight. IAS's airport security scanner takes a digital photograph of the passenger, scans his or her fingerprint, and scans a proper piece of identification (drivers license, passport, etc.). It then matches these identity points to the boarding pass and to the checked and carry-on baggage, which are then assigned a bar code. This data can be stored in a file as small as 100 bytes, which fits easily onto the magnetic stripe of a credit or "travel" card, or the magnetic stripe found on boarding passes.

This is dispensed for the passenger to use throughout additional security checks in the airport. The card or boarding pass holds data matching the photo, name and fingerprint scan to the name on the checked and carry-on baggage.

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This data is compared a second time at the x-ray security check and a final time at the gate during boarding to ensure the passenger listed on the boarding pass is also the passenger boarding the plane, and that his or her baggage has not been switched.

A positive baggage match system ensures that no checked bag can be loaded on a plane until each passenger has boarded the flight.

Neldon Johnson, IAS' President and CEO, said: "IAS will begin demonstrating this technology to airport authorities, airlines, unions and current security staffing organisations to bring biometrics into the current infrastructure and augment the nation's air travel security procedures."

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Iris-based Security System

Cash Technologies' subsidiary Cintelia Systems and Iridian Technologies have agreed to market biometric security systems to government agencies.

The systems will be based on Iridian's iris recognition technology and Cintelia's PrISM (Predictive Identification and Security Manager) software which permits sophisticated real time risk analysis and the rapid acquisition and management of information from external sources such as law enforcement and financial databases.

"We developed our PrISM security system to protect against fraud in financial transactions and concluded that iris recognition was the biometric of choice in any high-security environment," said Bruce Korman, President of Cintelia. "Teaming with Iridian provides a best-of-breed solution to government agencies trying to identify criminals and other high-risk individuals in order to protect airports, embassies and borders."

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National Enters Tri-band Market

National Semiconductor Corp has introduced a GSM chipset which integrates a transceiver, power management chip, and analog and digital basebands, marking its entry into the tri-band GSM market.

The chipset is now in full volume production with a leading European manufacturer in that company's smallest, lightest phone to date. This phone recently received full type approval.

The chipset is designed for the next generation of tri-band GSM mobile phones that include features such as enhanced messaging service, a chat function and WAP. The chipset's small form factor and high level of integration enable manufacturers to produce a phone that is approximately the length and width of a credit card.

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Siemens Markets ANDiS

Siemens Information and Communications Networks (ICN) is to market and distribute Bell ID's ANDiS multi-application Smart Card management system worldwide.

The agreement covers the whole ANDiS suite which includes a Web-based or client/server card management system, an application management system including post issuance personalisation, a management system for encrypted keys and a certificate management system for PKI environments.

Co-operation with a global player like Siemens will enable Bell ID to expand its geographical markets and offer clients local support by trained Siemens staff, said Igno Peters, Bell ID's Managing Director.

Recently, Siemens and Bell ID won their first project together in The Netherlands where Siemens is the main contractor of a Company Card project for the Dutch tax authorities and utilised Bell ID's ANDiS card and application management system.

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What Happened to Smart Cards in 2001?

When you remember that over half the microprocessor Smart Cards issued are for GSM SIM cards then any downturn in this area will clearly have a major impact. Companies such as Gemplus, SchlumbergerSema, and Oberthur are all heavily involved in GSM and in the case of Gemplus at least, this is the dominant part of their business. Although the sales figures for handsets this year has been disappointing they are none the less substantial and you would need to be a real pessimist to imagine that this is anything but a temporary blip in the market.

The biggest consumer of the other half of the microprocessor Smart Card market is the financial industry. The forceful promotion of Smart Cards by Visa and Mastercard is persuading the banks to issue Smart Cards but not in the way that the manufacturers would like. The simple CPU based cards being adopted for EMV are almost a commodity with little added value. The more advanced and profitable multi-application cards based on JavaCard and Multos have had little impact since the banks in general are playing safe by sticking to the low cost cards of around \$1 to \$2 instead of the \$5 to \$8 incurred by the multi-application cards.

Of course the problem is not only in the provision of the cards but also the infrastructure. All those companies providing card management systems have also had a lean year. Post issuance personalisation has not yet happened in either the financial or mobile space. But we can make a convincing case that its just a matter of time and sooner rather than later.

The financial world is the easiest case to explain. The cost of the cards is a straight attack on the Bank's bottom line, you have to find a good business case to pursue multi-application Smart Cards. From a bank's perspective the Smart Card infrastructure is almost non-existent. While the ATMs and in due course the POS terminals are being modified to accept Smart Cards we are not yet there and even if we were it is difficult to see what possible advantage the consumer gains from the Smart Card. Of course we can show how much more secure the Smart Card is over the magnetic stripe card but in itself the consumer only gains when he is able to do something better or preferably something new that

improves his way of life.

A Smart Card is really the only viable way of implementing electronic cash in a secure way but it hasn't caught on with the consumer. No matter how people might want to dress the figures, consumers do not see the advantage of electronic cash over the real thing. There may be a lot of cards out there but the number of transactions per user barely disturbs the surface of the water. The reason is really very simple, physical cash is a fantastic product and therefore electronic cash will only take over where the real thing fails. This does exist in two areas, unattended ticket and vending machines where the ubiquitous frustration in the queue tells you everything you need to know and then there is the as yet untapped area of remote payments whether B2C, B2B, or any other combination of business, consumers and governments. Even better we have both terrestrial and mobile communication infrastructures all looking for a solution. Credit and Debit cards are only a partial solution because of the substantial number of citizens who are either unable or choose not to hold such cards. Critical mass is core to the problem and that is part of the horse and cart dilemma. Which comes first, the cards or the infrastructure?

The GSM infrastructure already has a Smart Card built into every phone albeit usually in the small ID 000 form factor but in all other ways it's just a Smart Card. The problem is that the card is not exactly portable, in most cases you need to remove the battery to get at the card and of course if you do take out the SIM card then the phone stops working. You can have two card slots in some phones where the second card slot is addressable through the SIM Toolkit (STK) software that now exists in most SIM cards. Although this approach has been heavily promoted by the French banks, the concept hasn't generally caught on. The dual SIM adapter advertised in your local mobile shop is a different matter, this is just a way of having two ordinary SIM cards under different accounts. Here you have the ability to select the active SIM card. This is a big advantage when travelling overseas because it enables you to have a local SIM card for making the expensive calls.

There has been quite a movement suggesting that you don't need a SIM card at all, why not just build the chip into the phone. The semiconductor manufacturers would be quite happy with this solution but the major card manufacturers at the current time

would be unlikely to survive such a change of business direction.

The Japanese NTT DoCoMo mobile phone system has been very successful without a SIM card and at the current time is probably the leader in mobile data services. So what factor most determines the viability of a SIM card? The consumer actually likes the SIM card, the mobile phone has become a fashion accessory and consumers frequently change their phones often within the first year. The consumer also likes to move between different network operators and services. There is a surprisingly large car boot sale market in unlocking phones so that you can change from the network operator who originally provided the phone under some service contract with the provision of the phone subsidised accordingly. Probably more important is the network operator who owns the SIM card but who has little control on any other part of the phone. The SIM card offers the network operator the potential to develop new services under common standards such as the SIM Toolkit (STK) that would almost certainly vanish if the SIM functionality were to be absorbed into the phone.

All things considered the SIM card seems likely to progress through the various GSM evolutionary phases to 3G and further. What will change is the functionality of the SIM card from the basic GSM operations to STK and the multi-application platforms now starting to appear in significant numbers. Over The Air (OTA) provisioning where applications and data can be sent over the airwaves to upgrade the phone seem likely to be a major growth area in the mobile world. Ring tones and graphics are probably just the tip of the iceberg.

The installation of Smart Card readers on every PC seems to be no nearer than last year. Setting up the PC/SC drivers on the PC for interfacing applications to the Smart Card reader is as fraught as ever. Monopolising the serial ports is just one of the problems that the user seems to have little control over. This shouldn't be an issue but with so many operating system variants currently in use 'plug and play' is usually more of a 'plug and pray', you might be lucky but don't hold your breath. In any event there seems little sign that the consumers are rushing out to connect smart card readers to their PCs. The Amex Blue Card program offered participants in the US a free Smart Card reader as part of the package. It is generally agreed that few members have connected their readers and with the launch of the Blue

Card in Europe and Australia the Smart Card reader has quietly vanished.

It is impossible to end the year without referring to the events of September 11th. This probably had the most radical impact on people's perception of security than any other event in modern time. The attacks were so extreme in their nature that most security controls even if applied correctly would have had little effect. Perhaps the most significant outcome is the lowering of the barriers between Identity and Authentication (I&A) and personal privacy. Citizens seem much happier to accept I&A in environments where there is a risk of inadequate security controls. This has certainly changed the role of biometrics which have been bubbling quietly in the background. Perhaps more than ever there is now a real and genuine need to get the best out of these systems. No biometric is going to be error free but that can be a manageable problem. The key advantage of biometrics is their property of non-transferability that offers a major improvement over, for example, a password. But it is essential to preserve this property so the miscreants cannot emulate or steal your biometric neither can they be allowed to steal the biometric data. This would be the same as stealing the password in any unattended environment. The Smart Card potentially has a major role in this area and of course if you could only input the biometric measurement directly into the Smart Card then the security of the acquisition terminal becomes a lesser problem.

It would be nice to end the year on a joyful note and perhaps we can look to the basic security offered by the Smart Card chip. There haven't been any new major attacks on the Integrated Circuit (IC) chip this year. The manufacturers of the silicon and software meanwhile have made major strides in limiting the vulnerability of the chip to DPA and Electromagnetic covert channels attacks that have been centre stage over the last few years. The inclusion of software is important because you cannot have a perfect chip. Correctly implemented defensive programming is an essential element in the overall security of the smart card chip. The vulnerability of the silicon has probably been overplayed, the software is far more sensitive and for my money high integrity software development techniques is the place to be in 2002.

Dr David B Everett

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All-in-one Mobile Device

APRIVA has introduced the x57, an all-in-one mobile device for businesses, which includes a barcode scanner, magnetic card reader and Smart Card reader. The company says it will enable businesses to run nearly an unlimited number of wireless applications. Kevin Hickey, APRIVA's Chief Executive Officer and President, said: "Depending on the companies' needs, they can conduct wireless credit card transactions, transmit barcodes or accept gift cards, among other applications, all with one device."

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Smart Card Readers for DoD

SCM Microsystems and Logicon have announced that they have begun shipping the SCM Readers for the Department of Defense's (DoD) Common Access Card (CAC) program, and that 50,000 SCM readers have been delivered as part of the initial deployment. SCM is providing a variety of serial port, USB and PCMCIA readers to Logicon for the project which will eventually see over four million military personnel use Smart Cards as an identification badge. "SCM's reader technology is important to the US Army's Smart Card initiative, enabling multiple security checkpoints through a single device," said John Gist, Logicon's program manager for the General Services Administration (GSA) Smart Access Common ID Card contract.

Website

✉ www.scmmicro.com

Collector's Corner

Bishop's University, in Quebec, Canada, has introduced ITC Systems' Campus Smart Card to all 2,500 students and staff enabling them to use an e-purse to pay for a variety of services ranging from photocopies and network printing in the library, to laundry services in the student residences. Additional functionality placed on the card includes photo and demographical information for identification purposes, plus a barcode and magnetic stripe for library, food service, security and other future applications. In 1999, Bishops was a key participant in the Mondex Sherbrooke Region test and became the first University in Canada to incorporate the Mondex program as part of its student card. The introduction of ITC Systems' Smart Card solution is the next step in the University's Smart Card program evolution.

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Visa EU Accelerates EMV Rollout Through Chip Incentive Programme



In February 2001 the Visa EU board allocated €168 million to accelerate chip migration in the EU region. The first results of this incentive package are just being realised with the recent announcements of rollout agreements from France, UK, Italy and Spain, representing more than 75% of Visa EU's transaction volumes. Public announcements from the retail and banking associations in France and UK for chip and PIN migration at major retailers are set for 2004, making the Visa EU liability shift by January 2005 a viable reality, said Waqar Qureshi, Head of Chip Infrastructure at Visa EU.

Large Retailers Benefit From Chip Incentive Programme

As part of Visa EU's €168m Chip Incentive Programme, large retailers will benefit from ready-made solutions, which can be installed into their integrated EPOS systems. Visa EU is working with ten vendors to supply EMV Level 1 and 2 compliant solutions, which will be ready during 2002. The first of these was demonstrated at Cartes 2001 in October through Retail Logic Ltd, which has an installed base of 65% of the UK market. "We will be making similar announcements with French, German, Spanish and Scandinavian vendors very soon," said Mr Qureshi.

Since large retailers of food, clothing and petrol represent 70% of the merchant sales volume and upgrade their own infrastructure, they are a vital part of the chip migration programme and Visa EU is ensuring that products are made available when these retailers decide to migrate. Issues such as transaction timing, card and PIN acceptance ergonomics and system interoperability have been addressed to ensure a smooth transition. Around 700,000 POS terminals and equipment need to migrate to achieve the required level of critical mass in this market sector.

New channels such as vending, ticketing, parking and set-top boxes are also being addressed through this initiative and will almost double the number of acceptance points from the current 4 million POS devices.

The vendor community has taken up the challenge and sees the benefits of converting 200 million cards, 4 million terminals and 250,000 ATMs as a once-in-a-lifetime opportunity to grab an estimated \$5 billion in new sales. Visa International has been working with a number of card vendors to bring to market 99 cent "white cards", which, when leveraged with incentives of up to €1.00, will mean that banks converting from magnetic stripe to chip will have to bear virtually no costs. "Most Members have signed up to the Chip Incentive Programme and have plans for rolling out chip and PIN cards from 2002 onwards," said Mr Qureshi.

Infrastructure migration is vital to making the programme successful and 85% of the EU banks have already upgraded their acquiring host systems to handle chip data, with the remaining 15% scheduled for completion by October 2002. All the POS vendors are developing EMV compliant products, which can be deployed in the 24 member countries from 2002 and requiring only one type approval cycle per product. There are twelve EMV Level 2 approved devices available today, with a further twenty scheduled for release in 2002. In parallel, the ATM vendors have already demonstrated transaction pilots and are currently going through the approval process. •

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